Table 7: New Triterpenoid Saponins Isolated from 2007-2012

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
Acanthopanax koreanum (Araliaceae)	Acankoreoside J 197-200, -38, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**171**) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[94]
	Acankoreoside K 225-230, -50, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**172**) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[94]
	Acankoreoside L 238-241, -46, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**174**) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[94]
	Acankoreoside M ^1H, ^{13}C, 2D, ESIMS	Aglycone (**175**) Glc(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[95]
	Acankoreoside N ^1H, ^{13}C, 2D, ESIMS	Aglycone (**176**) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[95]
	Acankoreoside O ^1H, ^{13}C, 2D, ESIMS	Aglycone (**177**) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[95]
A.senticosus	Acanthopanaxoside E -20.8, IR, ^1H, ^{13}C, 2D, FABMS	Echinocystic acid (**10**) GlcA(OH-3β) Glc(CO_2H-28)	[96]
Acanthophyllum elatius, A.lilacinum A.sordidum (Caryophyllaceae)	Compound 1 -7.1, ^1H, ^{13}C, 2D, FABMS	Gypsogenic acid (**11**) Gal(CO_2H-23) Glc-^{6}Gal(CO_2H-28) $\vert^3$ Glc	[97]
	Compound 2 -15.6, ^1H, ^{13}C, 2D, FABMS	Gypsogenic acid (**11**) Glc-^{6}Gal(CO_2H-28) $\vert^3$ Glc	[97]
Achlionice violaecuspidata (Holothurioidea)	Achlioniceoside A_1 228-229, ^1H, ^{13}C, 2D, ESIMS Achlioniceoside A_2 229-230, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**180**) (SO_3Na-6')Glc-^{4}Xyl(OH-3β) $\vert^2$ (MeO-3')Glc-^{3}(SO_3Na-6')Glc-^{4}Quin Aglycone (**182**) (SO_3Na-6')Glc-^{4}Xyl(OH-3β) $\vert^2$	[98] [98]

Table 7:Continued.

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	Achlioniceoside A_3 225-227,UV, IR, ^{1}H, ^{13}C, 2D, ESI-MS	(MeO-3')Glc-^{3}(SO_3Na-6')Glc-^{4}Quin Aglycone (**189**) (SO_3Na-6')Glc-^{4}Xyl(OH-3β) $\vert^{2}$ (MeO-3')Glc-^{3}(SO_3Na-6')Glc-^{4}Quin	[98]
Aesculus glabra (Sapindaceae)	Aescuilioside G1 +2.3, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**89**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[99]
	Aesculioside G2 -1.8, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**85**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[99]
	Aesculioside G3 +7.4, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**98**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[99]
	Aesculioside G4 -1.3, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**87**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[99]
	Aesculioside G5 -8.0, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**97**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[99]
	Aesculioside G6 -21.6, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**94**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[99]
	Aesculioside G7 -18.2, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**127**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[99]
	Aesculioside G8 -7.9, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**128**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[99]
	Aesculioside G9 -15.2, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**99**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$	[99]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
		Gal	
	Aesculioside G10 -15.3, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**95**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[99]
	Aesculioside G11 -22.3, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**99**) Ara(f)-^{3}(OMe-6')GlcA(OH-3β) $\vert^{2}$ Gal	[99]
	Aesculioside G12 -19.5, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**86**) Ara(f)-^{3}(OMe-6')GlcA(OH-3β) $\vert^{2}$ Gal	[99]
	Aesculioside G13 -15.7, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**133**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Glc	[99]
	Aesculioside G14 -14.5, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**83**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Glc	[99]
	Aesculioside G15 -26.9, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**84**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Glc	[99]
	Aesculioside G16 -27.9, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**90**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Glc	[99]
A.pavia	Aesculioside II_e ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**132**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Glc	[100]
	Aesculioside II_f ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**133**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[100]
	Aesculioside II_g ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**83**) Ara(f)-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[100]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	Aesculioside II_h ^1H, ^{13}C, 2D, ESIMS	Aglycone (**125**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Glc	[100]
	Aesculioside II_i ^1H, ^{13}C, 2D, ESIMS	Aglycone (**91**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Glc	[100]
	Aesculioside II_j ^1H, ^{13}C, 2D, ESIMS	Aglycone (**84**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Gal	[100]
	Aesculioside II_k ^1H, ^{13}C, 2D, ESIMS	Aglycone (**90**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Gal	[100]
	Aesculioside III_a ^1H, ^{13}C, 2D, ESIMS	Aglycone (**85**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Glc	[100]
	Aesculioside III_b ^1H, ^{13}C, 2D, ESIMS	Aglycone (**135**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Gal	[100]
	Aesculioside III_c ^1H, ^{13}C, 2D, ESIMS	Aglycone (**134**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Glc	[100]
	Aesculioside III_d ^1H, ^{13}C, 2D, ESIMS	Aglycone (**96**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Gal	[100]
	Aesculioside III_e ^1H, ^{13}C, 2D, ESIMS	Aglycone (**100**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Glc	[100]
	Aesculioside III_f ^1H, ^{13}C, 2D, ESIMS	Aglycone (**88**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Gal	[100]

Table 7: Continued.

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
Albizia chinensis (Leguminosae)	Albizoside A -34.4, UV, IR, ^1H & ^{13}C, 2D, MALDITOFMS	Aglycone (**101**) Xyl-^{2}Fuc-^{6}Glc(OH-3β) [(2E,6S)-2-hydroxymethyl-6-methyl-2',7'-octadienoyloxy-4']Quin-^{4}[(2'E,6'S)-2-hydroxymethyl-6-methyl-2',7'-octadienoyloxy]Quin-^{4}[(2''E,6''S)- 2′,6′-dimethyl-2,7-octadienoyloxy]Quin(OH-21β) Ara(f)-^{4}Rha-^{2}Glc(CO_2H-28) $\vert^3$ Glc	[101]
	Albizoside B -22.0, UV, IR, ^1H & ^{13}C, MALDITOFMS	Aglycone (**101**) Xyl-^{2}Fuc-^{6}Glc(OH-3β) $\vert^2$ Glc [(2E,6S)-2-hydroxymethyl-6-methyl-2',7'-octadienoyl-4']Quin-^{4}[(2'E,6'S)-2-hydroxymethyl-6-methyl-2',7'-octadienoyloxy]Quin-^{4}[(2''E,6''S)-2′,6′-dimethyl-2,7-octadienoyloxy]Quin(OH-21β) Ara(f)-^{4}Rha-^{2}Glc(CO_2H-28) $\vert^3$ Glc	[101]
	Albizoside C -16.0, UV, IR, ^1H & ^{13}C, 2D, MALDITOFMS	Aglycone (**101**) Xyl-^{2}Ara-^{6}Ara(OH-3β) $\vert^2$ Glc [(2E,6S)-2-hydroxymethyl-6-methyl-2',7'-octadienoyloxy]Quin-^{4}[(2'E,6'S)- 2′,6′-dimethyl-2,7-octadienoyloxy]Quin(OH-21β) Ara(f)-^{4}Rha-^{2}Glc(CO_2H-28) $\vert^3$ Glc	[101]
	Albizoside D -10.2, UV, IR, ^1H & ^{13}C, 2D, QFTMS	Aglycone (**101**) Xyl-^{2}Fuc-^{6}Glc(OH-3β) $\vert^2$ Glc [(2E,6S)-2′,6′-dimethyl-2',7'-octadienoyloxy]Quin-^{4}[(2'E,6'S)-2-hydroxymethyl-6-methyl-2,7-octadienoyloxy]Quin(OH-21β) Ara(f)-^{4}Rha-^{2}Glc(CO_2H-28) $\vert^3$ Glc	[102]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	slbizoside E -14.3, UV, IR, ^{1}H & ^{13}C, 2D,QFTMS	Aglycone (**101**) Xyl-^{2}Ara-^{6}Glc(OH-3β) [(2E,6S)-2-hydroxymethyl-6-methyl-2',7'-octadienoyloxy-4']Quin(2'E,6'S)-2-hydroxymethyl-6-methyl-2',7'-octadienoyloxy]Quin-^{4}[(2''E,6''S)- 2′,6′-dimethyl-2,7-octadienoyloxy]Quin(OH-21β) Ara-^{4}Rha-^{2}Glc(CO_2H-28) $\vert^{3}$ Glc	[102]
A.coriaria	Coriarioside A -40.0, ^{1}H & ^{13}C, 2D,ESIMS,FABMS	Aglycone (**106**) Fuc-^{6}Glc(OH-3β) $\vert^{2}$ Glc [(2E,6S)-2′,6′-dimethyl-6'-hydroxy-2',7'-octadienoyloxy]Quin-^{4}[(2′E,6′S)-2′,6′-dimethyl-6'-hydroxy-2',7'-octadienoyloxy]Quin(OH-21β) Rha-^{2}Glc(CO_2H-28)	[103]
	Coriarioside B -30.0, ^{1}H & ^{13}C, 2D, ESIMS, FABMS	Aglycone (**106**) [(2E,6S)-2-hydroxymethyl-6-methyl-2',7'-octadienoyloxy-4'](2'E,6'S)-2-hydroxymethyl-6-methyl-2',7'-octadienoyloxy]Quin-^{4}[(2''E,6''S)-2′,6′-dimethyl-2,7-octadienoyloxy]Quin(OH-21β) Fuc-^{6}Glc(OH-3β) $\vert^{2}$ Glc Xyl-^{3}Rha-^{2}Glc(CO_2H-28)	[103]
A.inundata	Compound1 +25, IR, ^{1}H & ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Ara-^{6}($NHCOCH_3$-2')Glc(OH-3β)	[104]
	Compound 2 -6, IR, ^{1}H & ^{13}C, 2D, ESIMS	Acacic acid lactone (**26**) Ara-^{2}Ara-^{6}($NHCOCH_3$-2')Glc(OH-3β)	[104]
A.procera	Saponin -0.3, ^{1}H,^{13}C,2D, FABMS	Echinocystic acid (**10**) Xyl-^{2}Ara-^{6}($NHCOCH_3$-2')Glc(OH-3β)	[105]
	Saponin +5.7, H, ^{13}C, 2D, FABMS	Echinocystic acid (**10**) Ara-^{2}Fuc-^{6}($NHCOCH_3$-2')Glc(OH-3β)	[105]
	Saponin -9.7, ^{1}H, ^{13}C,	Echinocystic acid (**10**) Xyl-^{2}Ara-^{6}($NHCOCH_3$-2')Glc(OH-3β)	[105]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	FABMS		
	Saponin 1	Echinocystic acid (**10**)	[106]
	-15.1, ^1H, ^{13}C, FABMS	Xyl-^{3}Gal-^{6}(NHCOCH$_3$-2')Glc(OH-3β) Glc(OH-16α)	
	Saponin 2	Echinocystic acid (**10**)	[106]
	^1H, ^{13}C, FABMS	Xyl-^{2}Ara-^{6}(NHCOCH$_3$-2')Glc(OH-3β) Glc(OH-16α)	
	Saponin 3	Echinocystic acid (**10**)	[106]
	^1H, ^{13}C, FABMS	Ara-^{2}Ara-^{6}(NHCOCH$_3$-2')Glc(OH-3β) Glc(OH-16α)	
Androsace umbellate (Primulaceae)	Compound 1 -16.82, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone(**165**) Xyl-^{2}Glc-^{4}Ara(OH-3β) | ^{2} Glc	[107]
	Compound 2 -20.19, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone(**165**) Xyl-^{2}Glc-^{4}Ara(OH-3β)	[107]
Anemone hupehensis (Ranunculaceae)	Compound 1 -33.6, IR, ^1H,^{13}C, ESIMS	Oleanolic acid (**6**) Rib-^{2}Rha-^{2}Ara(OH-3β) Glc-^{3}Rha-^{4}Glc-^{6}Glc(CO$_2$H-28)	[108]
	Compound 2 -20.2, IR, ^1H,^{13}C, ESIMS	Oleanolic acid (**6**) Glc-^{4}Ara(OH-3β) | ^{2} Rib-^{3}Rha Glc-^{2}Rha-^{4}Glc-^{6}Glc(CO$_2$H-28)	[108]
	Compound 3 -29.3, IR, ^1H,^{13}C, ESIMS	Hederagenin (**8**) Rib-^{3}Rha-^{2}Ara(OH-3β) Glc-^{2}Rha-^{4}Glc-^{6}Glc(CO$_2$H-28)	[108]
A.raddena	Raddeanoside R_{22} 285-286, +18.8, IR, ^1H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Glc-^{4}Ara(OH-3β) | ^{2} Glc	[109]
	Raddeanoside R_{23} 248-250, +124, IR, ^1H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Glc-^{4}Ara(OH-3β) | ^{2} Ara-^{3}Rha	[109]
A.taipaiensis	Compound 3 IR, ^1H,^{13}C, ESIMS	Oleanolic acid (**6**) Xyl-^{2}Rha-^{2}Ara(OH-3β) Glc(CO$_2$H-28)	[110]
	Compound 1 236-239, +12.6,	Hederagenin (**8**) Glc-^{4}Ara(OH-3β)	[110]

Table 7: Continued

Source 1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	IR, ^1H,^{13}C, 2D, ESIMS Compound **2** 249-253, -5.1, IR, ^1H,^{13}C, 2D, ESIMS	$\vert^2$ Xyl-^{3}Rha Oleanolic acid (**6**) Glc-^{4}Glc-^{4}Ara(OH-3β) $\vert^2$ Xyl-^{3}Rha	[110]
Antonea ovate (Loganaceae)	Antonioside A -10.0,^1H, ^{13}C, 2D,ESIMS	Aglycone (**120**) Xyl-^{2}Glc-^{3}GlcA(OH-3β) $\vert^2$ Glc	[111]
	Antonioside B -7,^1H, ^{13}C, 2D, ESIMS	Aglycone (1**21**) Xyl-^{2}Glc-^{3}GlcA(OH-3β) $\vert^2$ Glc	[111]
	Antonioside C -11,^1H, ^{13}C, 2D, ESIMS	Aglycone (**122**) Xyl-^{2}Glc-^{3}GlcA(OH-3β) $\vert^2$ Glc	[111]
	Antonioside D -13,^1H, ^{13}C, 2D, ESIMS	Aglycone (**53**) Xyl-^{2}Glc-^{3}GlcA(OH-3β) $\vert^2$ Glc	[111]
	Antonioside E +15.7,^1H, ^{13}C, 2D, ESIMS	Aglycone(**96**) Glc-^{3}Ara-^{6}Glc(OH-3β) $\vert^4$ $\vert^2$ Glc Glc	[112]
	Antonioside F +19.9,^1H, ^{13}C, 2D, ESIMS	Aglycone (**132**) Glc-^{3}Ara-^{6}Glc(OH-3β) $\vert^4$ $\vert^2$ Glc Glc	[112]
	Antonioside G +18.2,^1H, ^{13}C, 2D, ESIMS	Aglycone (**123**) Glc-^{3}Ara-^{6}Glc(OH-3β) $\vert^4$ $\vert^2$ Glc Glc	[112]
	Antonioside H +16.3, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**124**) Glc-^{3}Ara-^{6}Glc(OH-3β) $\vert^4$ $\vert^2$ Glc Glc	[112]
	Antonioside I +17.8,^1H, ^{13}C, 2D, ESIMS	Aglycone (**125**) Glc-^{3}Ara-^{6}Glc(OH-3β) $\vert^4$ $\vert^2$	[112]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	Antonioside J +18.1,^{1}H, ^{13}C, 2D, ESIMS	Glc Glc Aglycone (**126**) Glc-^{3}Ara-^{6}Glc(OH-3β) $\vert^{4}$ $\vert^{2}$ Glc Glc	[112]
Aralia elata (Araliaceae)	Tarasaponin IV 215-220, -10.5, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Ara(f)-^{4}GlcA(OH-3β) $\vert^{2}$ Glc Glc(CO_2H-28)	[113]
	Elatoside L 235-240, -18.2, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Ara(f)-^{4}GlcA(OH-3β) $\vert^{2}$ Glc-^{6}Glc Glc-^{6}Glc(CO_2H-28)	[113]
Ardisia gigantifolia (Myrsinaceae)	Compound 1 -17.5,^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**170**) Rha-^{3}Glc-^{4}Ara(OH-3β) $\vert^{2}$ $\vert^{2}$ Xyl Glc	[114]
	Compound 2 -9.5,^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**168**) Rha-^{3}Glc-^{4}Ara(OH-3β) $\vert^{2}$ $\vert^{2}$ Glc-^{3}Xyl Glc	[114]
	Compound 3 ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**169**) Rha-^{3}Glc-^{4}Ara(OH-3β) $\vert^{2}$ $\vert^{2}$ Xyl Glc	[114]
A.pusilla	Triterpenoid saponin 3 -23.2,^{1}H, ^{13}C, 2D, ESITOFMS	Aglycone (**167**) Glc-^{3}Glc-^{3}Glc-^{4}Ara(OH-3β $\vert^{2}$ $\vert^{2}$ Xyl Glc	[115] [115]
	Triterpenoid saponin 4 +4.5,^{1}H, ^{13}C, 2D, ESITOFMS	Aglycone (**48**) Rha-^{2}Glc-^{4}Ara(OH-3β) $\vert^{2}$	[115]

Table 7: Continued.

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	Triterpenoid saponin 5 -11.3,^{1}H, ^{13}C, 2D, ESITOFMS	Glc Aglycone (**40**) Rha-^{2}Glc-^{4}Ara(OH-3β) |^2 Glc	[115]
Arenaria montana (Caryophyllaceae)	Compound 1 -21.2, IR, ^{1}H, ^{13}C, 2D, ESIMS, FABMS	Echinocystic acid (**10**) Glc(OH-3β) Xyl-^{4}Rha(CO_2H-28) |^2 Rha	[116]
	Compound 2 -17.3, IR, ^{1}H, ^{13}C, 2D, ESIMS, FABMS	Echinocystic acid (**10**) Glc(OH-3β)Ara-^{3}Xyl-^{4}Rha(CO_2H-28) |^2 Rha	[116]
	Compound 3 -12.6, IR, ^{1}H, ^{13}C,2D, ESIMS, FABMS	Caulophyllogenin (**16**) Glc(OH-3β) Apio(f)- ^{3}Rha(CO_2H-28) |^2 Apio(f)- ^{3}Xyl-^{4}Rha	[116]
Astragalus eremophilus (Leguminosae)	EremophilosideA 264-266, +8.7, IR, ^{1}H, ^{13}C, 2D, MALDITOFMS	(**2**)	[117]
	Eremophiloside B 270-272, -2.5, IR, ^{1}H, ^{13}C, 2D, MALDITOFMS	Aglycone (**217**) Rha(OH-3β) Rha(OH-6α) Xyl(OH-25)	[117]
	Eremophiloside C 278-280, +23. IR, ^{1}H, ^{13}C, 2D, MALDITOFMS	Aglycone (**218**) Ara-^{2}Xyl(OH-3β)	[117]
	Eremophiloside D 289-291, +10.3 IR, ^{1}H, ^{13}C, 2D, MALDITOFMS	Aglycone (**211**) Ara-^{2}Xyl(OH-3β)	[117]
	Eremophiloside E 275-278, -9.9,	Aglycone (**208**) Ara-^{2}Xyl(OH-3β)	[117]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, Spectra recorded (2)	Structure (3)	Ref. (4)
	IR, ^1H, ^{13}C, 2D, MALDITOFMS		[117]
	Eremophiloside F 285-288, +11.1, IR, ^1H, ^{13}C, 2D, MALDITOFMS	Aglycone (**212**) Ara-^{2}Xyl(OH-3β)	[117]
	Eremophiloside G 160-162, -30.8, IR, ^1H, ^{13}C, 2D, MALDITOFM	Aglycone (**209**) Ara-^{2}Xyl(OH-3β)	[117]
	Eremophiloside H IR, ^1H, ^{13}C, 2D, MALDITOFMS	Aglycone (**213**) Ara-^{2}Xyl(OH-3β)	[117]
	Eremophiloside I 170-173, -12.0 IR, ^1H, ^{13}C, 2D, MALDITOFMS	Aglycone (**220**) Ara-^{2}Xyl(OH-3β)	[117]
	Eremophiloside J 260-262, +13.9 IR, ^1H, ^{13}C, 2D, MALDITOFMS	Aglycone (**210**) Ara-^{2}Xyl(OH-3β)	[117]
	Eremophiloside K 269-271, +7.5 IR, ^1H, ^{13}C, 2D, MALDITOFMS	Aglycone (**211**) Ara-^{2}Xyl(OH-3β)	[18]
A.tauricolus	Compound 2 +13.1, IR, ^1H, ^{13}C, 2D, MALDITOFMS	Aglycone (**55**) Rha-^{2}Xyl-^{2}GlcA(OH-3β) Glc(CO_2H-29)	[18]
	Compound 3 +9.3, IR, ^1H, ^{13}C, 2D,MALDITOFMS	Aglycone (**57**) Rha-^{2}Glc-^{2}GlcA(OH-3β) Glc(OH-29)	[18]
	Compound 4 +22.4, IR, ^1H, ^{13}C,2D,MALDITOFMS	Aglycone (**56**) Rha-^{2}Xyl-^{2}GlcA(OH-3β) Rha(OH-21β)	[18]
	Compound 5 +21.1, IR, ^1H, ^{13}C, 2D, MALDITOFMS	Aglycone (**56**) Rha-^{2}Glc-^{2}GlcA(OH-3β) Rha(OH-21β)	[18]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	Compound 6 +15.6, IR, ^{1}H, ^{13}C, 2D, MALDITOFMS	Aglycone (**55**) Rha-^{2}Glc-^{2}GlcA(OH-3β) Glc(CO_2H-29)	[18]
	Compound 7 +19.6, IR, ^{1}H, ^{13}C, 2D, MALDITOFMS	Aglycone (**58**) Rha-^{2}Xyl-^{2}GlcA(OH-3β) Rha(OH-22β)	[18]
	Compound 9 +9, IR, ^{1}H, ^{13}C, 2D,MALDITOFMS	Aglycone (**50**) Rha-^{2}Glc-^{2}GlcA(OH-3β)	[18]
	Compound 11 +16.8, IR, ^{1}H, ^{13}C, 2D, MALDITOF	Aglycone (**41**) Rha-^{2}Glc-^{2}GlcA(OH-3β)	[18]
	Compound 12 +16.8, IR, ^{1}H, ^{13}C, 2D, MALDITOFMS	Aglycone (**55**) Glc-^{2}GlcA(OH-3β) Glc(CO_2H-29)	[18]
	Compound 14 +11.5, IR, ^{1}H, ^{13}C, 2D, MALDITOFMS	Aglycone (**55**) Xyl-^{2}GlcA(OH-3β) Glc(CO_2H-29)	[18]
Bellis perenni (Asteraceae)	Perennisoside I +16.1, IR, ^{1}H, , ^{13}C, 2D, FABMS	Aglycone (**42**) Glc-^{3}Glc(CO_2H-28) $\vert^{2}$ Rha	[118]
	Perennisoside II +19.5, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**42**) Gal-^{3}Glc(CO_2H-28) $\vert^{2}$ Rha	[118]
	Perennisoside III +1.7, IR, ^{1}H, ^{13}C, 2D, FABMS	Bayogenin (**18**) Glc(OH-3β) Glc-^{3}Glc(CO_2H-28) $\vert^{2}$ Rha	[118]
	Perennisoside IV +4.6, IR, ^{1}H, ^{13}C, 2D, FABMS	Bayogenin (**18**) Glc(OH-3β) Gal-^{3}Glc(CO_2H-28) $\vert^{2}$ Rha	[118]
	Perennisoside V	Aglycone (**42**)	[118]

Table 7: Continued.

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	+7.1, IR, ^{1}H, ^{13}C, 2D, FABMS	Glc(OH-3β) Glc-^{3}Glc(CO_2H-28) $\vert^{2}$ Rha	[118]
	Perennisoside VI +8.8, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**42**) Glc(OH-3β) Gal-^{3}Glc(CO_2H-28) $\vert^{2}$ Rha	[118]
	Perennisoside VII +14.3, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**42**) Glc(OH-3β) Gal-^{3}Glc(CO_2H-28) $\vert^{2}$ Rha	[118]
	Perennisaponin A -7.8, IR, ^{1}H, ^{13}C, 2D, FABMS	Polygalacic acid (**24**) Rha-^{3}Xyl-^{4}(OAc-2')Rha-^{2}(OAc-4')Fuc(CO_2H-28)	[119]
	Perennisaponin B -13.4, ^{1}H, ^{13}C, 2D, ESIMS	Polygalacic acid (**24**) Rha-^{3}Xyl-^{4}(OAc-2')Rha-^{2}[Methyl(S)-(+)-3-hydroxybutryloyloxy-4']Fuc(CO_2H-28)	[119]
	Perennisaponin C -13.3, ^{1}H, ^{13}C, 2D, ESIMS	Polygalacic acid (**24**) Rha(OH-3β) Xyl-^{4}(OAc-2')Rha-^{2}[{Methyl(S)-(+)-3-hydroxybutryloyloxy}-4']Fuc(CO_2H-28)	[119]
	Perennisaponin D -14.9, ^{1}H, ^{13}C, 2D, ESIMS	Polygalacic acid (**24**) Rha(OH-3β) Rha-^{3}Xyl-^{4}(OAc-2')Rha-^{2} [3-hydroxybutryloyloxy-4']Fuc(CO_2H-28)	[119]
	Perennisaponin E -13.7, ^{1}H, ^{13}C, 2D, ESIMS	Polygalacic acid (**24**) Rha(OH-3β) Rha-^{3}Xyl-^{4}(OAc-2')Rha-^{2}[(S)-3-hydroxybutryloyloxy-4']Fuc(CO_2H-28)	[119]
	Perennisaponin F -21.2, ^{1}H, ^{13}C, 2D, ESIMS	Polygalacic acid (**24**) Rha(OH-3β) Rha-^{3}Xyl-^{4}(OAc-2')Rha-^{2}[{Methyl(S)-(+)-3-hydroxybutryloyloxy}-4']Fuc(CO_2H-28)	[119]
B.sylvestris	Besylvoside I -12.0,^{1}H, ^{13}C, 2D, ESIMS	Bayogenin (**18**) Xyl-^{6}Glc(CO_2H-28) $\vert^{3}$ $\vert^{2}$ Glc Glc	[19]
	Besylvoside II	Bayogenin (**18**)	[19]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	+32.2, ^{1}H, ^{13}C, 2D, ESIMS	Xyl-^{6}Glc(CO_2H-28) $\vert^{2}$ Glc	
	Besylvoside III +3.0, ^{1}H, ^{13}C, 2D, ESIMS	Bayogenin (**18**) Xyl-^{6}Glc(CO_2H-28)	[19]
	Besylvoside IV -8.3, ^{1}H, ^{13}C, 2D, ESIMS	Bayogenin (**18**) Glc-^{3}Glc(CO_2H-28) $\vert^{2}$ Glc	[19]
	Besylvoside V -4.3, ^{1}H, ^{13}C,2D,	Bayogenin (**18**) Glc-^{2}Glc(CO_2H-28)	[19]
	Besylvoside VI -6.8, ^{1}H, ^{13}C, 2D, ESIMS	Bayogenin (**18**) Glc(OH-3β) Xyl-^{6}Glc(CO_2H-28) $\vert^{3}$ $\vert^{2}$ Glc Glc	[19]
Blighia sapida (Sapindaceae)	Blighoside A IR, ^{1}H, ^{13}C, 2D, ESITOFMS	Hederagenin (**8**) Ara-^{4}(OAc-3')Glc-^{3}Rha-^{2}Ara(OH-3β)	[120]
	Blighoside B IR, ^{1}H, ^{13}C, 2D, ESITOFMS	Oleanolic acid (**6**) Ara-^{4}(OAc-3')Glc-^{3}Rha-^{2}Ara(OH-3β)	[120]
	Blighoside C IR, ^{1}H, ^{13}C, 2D, ESITOFMS	Oleanolic acid (**6**) (OAc-4',6')Glc-^{3}Rha-^{4}Glc(OAc-3',6')-^{3}Rha-^{2}Xyl-^{2}Xyl(OH-3β)	[120]
Bohadschia marmorata (Holothuridae)	Marmoratoside A IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**181**) (OMe-3')Glc-^{3}Glc-^{4}Xyl(OH-3β) $\vert^{2}$ (OMe-3')Glc-^{3}Glc-^{4}Qui	[121]
	17α-hydroxy impatienside A 209-211, -11, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**184**) (OMe-3')Glc-^{3}Glc-^{4}Xyl(OH-3β) $\vert^{2}$ (OMe-3')Glc-^{3}Glc-^{4}Qui	[121]
	Marmoratoside B 215-217, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**182**) (OMe-3')Glc-^{3}Glc-^{4}Xyl(OH-3β) $\vert^{2}$ (OMe-3')Glc-^{3}Glc-^{4}Qui	[121]
	25-acetoxy bivittoside D 205-207, -9.1, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**187**) (OMe-3')Glc-^{3}Glc-^{4}Xyl(OH-3β) $\vert^{2}$ (OMe-3')Glc-^{3}Glc-^{4}Qui	[121]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	17-hydroxy fuscocineroside B 224-226, -0.2, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**191**) (OMe-3')Glc-^{3}Glc-^{4}Quin-^{2}(4'-SO_3Na)Xyl(OH-3β)	[122]
	25-hydroxy fuscocineroside B 219-221, -8.3, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**192**) (OMe-3')Glc-^{3}Glc-^{4}Quin-^{2}(4'-SO_3Na)Xyl(OH-3β)	[122]
Butyrospermum parkii (Sapotacea)	Parkioside A -7.6, IR, ^{1}H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Glc(OH-3β) Xyl-^{3}Rha-^{2}Xyl(CO_2H-28)	[123]
	Parkioside B -51.8, IR, ^{1}H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Apio(f)-^{3}Glc(OH-3β) Apio(f)-^{3}Xyl-^{4}Rha-^{2}Xyl(CO_2H-28) ^{3}| Rha	[123]
	Parkioside C -39.9, IR, ^{1}H, ^{13}C, 2D, ESIMS	16α-hydroxy protobassic acid (**20**) GlcA(OH-3β) Rha-^{3}Xyl-^{4}Rha-^{2}Xyl(CO_2H-28)	[123]
Camellia sinensis (Theaceae)	Theasaponin A_6 ^{1}H,^{13}C, 2D, FABMS	Aglycone (**92**) Glc-^{2}Ara-^{3}GlcA(OH-3β) |^{2} Gal	[124]
	Theasaponin A_7 ^{1}H,^{13}C, 2D, FABMS	Aglycone (**93**) Glc-^{2}Ara-^{3}GlcA(OH-3β) |^{2} Gal	[124]
	Theasaponin B_5 ^{1}H,^{13}C, 2D, FABMS	Aglycone (**130**) Xyl-^{2}Ara-^{3}GlcA(OH-3β) |^{2} Gal	[124]
Catunaregan spinosa (Rubiaceae)	Catunaroside A +10.4, IR, ^{1}H, ^{13}C, 2D, ESIMS	Siaresinolic acid (**25**) Glc-^{3}Glc(OH-3β) |^{2} Xyl	[125]
	Catunaroside B	Oleanolic acid (**6**)	[125]

Table 7: Continued.

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	+32.4, IR, ^{1}H, ^{13}C, 2D, ESIMS	Glc-^{3}Glc(OH-3β) ^{2}| Rha	
	Catunaroside C +37.5, IR, ^{1}H, ^{13}C, 2D, ESIMS	Siaresinolic acid (**25**) Glc-^{3}Glc(OH-3β) ^{2}| Rha Glc(CO_2H-28)	[125]
	Catunaroside D +68.5, IR, ^{1}H, ^{13}C, 2D, ESIMS	Siaresinolic acid (**25**) Glc-^{3}Glc(OH-3β) ^{2}| Xyl Glc(CO_2H-28)	[125]
Cephalaria scoparia (Dipsacaceae)	Scoposide A -3.3, IR, ^{1}H, ^{13}C 2D,FABMS	Oleanolic acid (**6**) Ara(OH-3β) Glc-^{6}Glc(CO_2H-28) ^{2}| Rha	[60]
	Scoposide B -4.5, IR, ^{1}H, ^{13}C, 2D, FABMS	Oleanolic acid (**6**) Xyl-^{4}Xyl-^{3}Rha-^{4}Glc(OH-3β) Glc-^{6}Glc(CO_2H-28)	[60]
	Scoposide C -2.8, IR, ^{1}H, ^{13}C, 2D, FABMS	Oleanolic acid (**6**) Glc-^{4}Xyl-^{3}Ara(OH-3β) ^{2}| Xyl-^{3}Rha Glc-^{6}Glc(CO_2H-28)	[60]
	Scoposide D -2.4, IR, ^{1}H, ^{13}C, 2D, FABMS	Oleanolic acid (**6**) Xyl-^{3}Rha-^{3}Ara(OH-3β) Glc(CO_2H-28)	[60]
	Scoposide E -4.0, IR, ^{1}H, ^{13}C, 2D, FABMS	Oleanolic acid (**6**) Xyl-^{3}Rha-^{3}Ara(OH-3β)	[60]
Clematis chinensis (Ranunculaceae)	Clematochinenoside A -62.0, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Hederagenin (**8**) Glc-^{2}Rha-^{6}Glc-^{3}(isoferuloyloxy-2')Glc-^{4}Glc-^{4}Rib-^{3}Rha-^{2}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[126]
	Clematochinenoside B -31.0, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Hederagenin (**8**) Glc-^{2}Rha-^{6}Glc-^{3}Glc-^{4}Glc-^{4}Rib-^{3}Rha-^{2}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[126]
	Clematochinenoside	Hederagenin (**8**)	[126]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	C -58.0, UV, IR, ^1H, ^{13}C, 2D, ESIMS	(isoferuloyloxy-2')Glc-^{4}Glc-^{4}Rib-^{3}Rha-^{2}Ara(OH-3β) |^3 Rha-^{6}Glc |^4 Glc Rha-^{4}Glc-^{6}Glc(CO_2H-28)	
	Clematochinenoside D -52.0, UV, IR, ^1H, ^{13}C, 2D, ESIMS	Hederagenin (**8**) (isoferuloyloxy-3')Glc-^{4}Glc-^{4}Rib-^{3}Rha-^{2}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[126]
	Clematochinenoside E -44.0, UV, IR, ^1H, ^{13}C, 2D, ESIMS	Hederagenin (**8**) (isoferuloyloxy-6')Glc-^{4}Glc-^{4}Rib-^{3}Rha-^{2}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[126]
	Clematochinenoside F -39.0, UV, IR, ^1H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) (isoferuloyloxy-6')Glc-^{4}Glc-^{4}Rib-^{3}Rha-^{2}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[126]
	Clematochinenoside G -66.0, UV, IR, ^1H, ^{13}C, 2D, ESIMS	Hederagenin (**8**) Glc-^{3}(isoferuloyloxy-2')Glc-^{4}Glc-^{4}Rib-^{3}Rha-^{2}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[126]
Codonopsis lanceolata (Campanulaceae)	Codonolaside III -56.6, IR, ^1H, ^{13}C, 2D, ESIMS	Echinocystic acid (**10**) Xyl-^{3}GlcA(OH-3β) Glc-^{4}Ara(CO_2H-28) |^2 Xyl-^{4}Rha	[127]
Combretum sundaicum (Holothuriaceae)	Compound 3 +18.4, UV, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**35**) (OAc-3')Rha(OH-23)	[128]
	Compound 4 +29.9, UV, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**35**) Rha(OH-23)	[128]
	Compound 5 +54.2, UV, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**33**) Rha(OH-1α)	[128]
	Compound 6	Aglycone (**34**)	[128]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	+27.9, UV, IR, ^1H, ^{13}C, 2D, ESIMS	Rha(OH-1α)	
	Compound 8 +51.3, UV, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**38**) Rha(OH-1α)	[128]
	Compound 9 +41.2, UV, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**36**) (OAc-4')Rha(OH-23)	[128]
	Compound 10, +31.2, UV, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**37**) (OAc-2',4')Rha(OH-6α)	[128]
Cucumaria okhotensis (Holothuriaceae)	Okhotoside B1 273-275 , -5.0, IR, ^1H, ^{13}C, 2D, ESIMS, FABMS	Aglycone (**178**) (OMe-3')Glc-^{3}Glc-^{4}Glc-^{2}(SO_3Na-4')Xyl(OH-3β)	[129]
	Okhotoside B2 244 , -9.0, IR, ^1H, ^{13}C, 2D, FABMS	Aglycone (**178**) (OMe-3')Glc-^{3}(SO_3Na-6')Glc-^{4}Glc-^{2}(SO_3Na-4')Xyl(OH-3β)	[129]
	Okhotoside B3 260-263, -10.0, IR, ^1H, ^{13}C, 2D, FABMS	Aglycone (**178**) (SO_3Na-6',OMe-3')Glc-^{3}(SO_3Na-6')Glc-^{4}Glc-^{2}Xyl(OH-3β)	[129]
Cyclamen repandum (Primulaceae)	Repandoside ^1H, ^{13}C, 2D, APITOFMS	Aglycone (**164**) Glc-^{4}Glc-^{4}Ara(OH-3β) | ^{2} | ^{2} Xyl Glc	[130]
Dianthus versicolor (Caryophylaceae)	Dianversicoside A +19.6, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**39**) Glc(CO_2H-23) Glc-^{2}[(3S)-3-hydroxy-3-methylglutarooyloxy-6']Glc-^{6}Glc(CO_2H-28)	[131]
	DianversicosideB -12.3, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**39**) Glc-^{2}[(3S)-3-hydroxy-3-methylglutarooyloxy-6']Glc-^{6}Glc(CO_2H-28) | ^{3} Glc	[131]
	Dianversicoside	Gypsogenic acid (**11**)	[131]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	C +22.8, IR, ^1H, ^{13}C, 2D, ESIMS	Glc(CO_2H-23) Glc-^{2}[(3S)-3-hydroxy-3-methylglutarooyloxy-6']Glc-^{6}Glc(CO_2H-28) $\vert^3$ Glc	
	DianversicosideD +8.4, IR, ^1H, ^{13}C, 2D, ESIMS	Gypsogenic acid (**11**) Glc-^{2}[(3S)-3-hydroxy-3-methylglutarooyloxy-6']Glc-^{6}Glc(CO_2H-28) $\vert^3$ Glc	[131]
	DianversicosideE -16.8, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**39**)Glc(CO_2H-23) Glc-^{2}[(3S)-3-hydroxy-3-methylglutarooyloxy]Glc-^{6}Glc(CO_2H-28) $\vert^3$ Glc	[131]
	DianversicosideF -8.5, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**39**) Glc(CO_2H-23) Glc-^{2}Glc-^{6}Glc(CO_2H-28)	[131]
	DianversicosideG -6.0, IR, ^1H, ^{13}C, 2D, ESIMS	Gypsogenic acid (**11**) Ara(OH-3β) Glc-^{2}Glc-^{6}Glc(CO_2H-28) $\vert^3$ Glc	[131]
Dodonaea visicosa (Sapindaceae)	Dodoneaside A -44.4, IR, ^1H, ^{13}C, 2D, FABMS	Aglycone (**112**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Glc	[132]
	Dodoneaside B -80.0, IR, ^1H, ^{13}C, 2D, FABMS	Aglycone (**119**) Ara(f)-^{3}GlcA(OH-3β) $\vert^2$ Glc	[132]
Echinopsis macrogona (Cactaceae)	Pachanoside C1 -14.7, IR, ^1H, ^{13}C, 2D, FABMS	Aglycone (**27**) Xyl-^{2}Glc-^{2}GlcA(OH-3β)	[8]
	Pachanoside E1 205-208, -28.1 IR, ^1H, ^{13}C, 2D, FABMS	Aglycone (**28**) Xyl-^{2}Glc-^{2}GlcA(OH-3β)	[8]
	PachanosideF 110.2, IR, ^1H,	Aglycone (**29**) Xyl-^{2}Glc-^{2}GlcA(OH-3β)	[8]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	^{13}C, 2D, FABMS Pachanoside G1 -14.6, IR, ^{1}H, ^{13}C, 2D, FABMS Bridgeside A1 -33.5, IR, ^{1}H, ^{13}C, 2D, FABMS Bridgeside C1 -33.7, IR, ^{1}H, ^{13}C, 2D, FABMS Bridgeside C2 -44.6, IR, ^{1}H,^{13}C, 2D, FABMS Bridgeside D1 -17.9, IR, ^{1}H, ^{13}C, 2D, FABMS Bridgeside D2 198-201, -34.5, IR, ^{1}H, ^{13}C, 2D, FABMS Bridgeside E1 205-208, -28.1, IR, ^{1}H, ^{13}C, 2D, FABMS Bridgeside G1 -36.5, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**30**) Xyl-^{2}Glc-^{2}GlcA(OH-3β) Bridgesigenin A (**43**) Rha-^{2}Glc-^{2}GlcA(OH-3β) Bridgesigenin C (**44**) Xyl-^{2}Glc-^{2}GlcA(OH-3β) Bridgesigenin C (**44**) Rha-^{2}Glc-^{2} (Na^{+})GlcA(OH-3β) Bridgesigenin D (**45**) Xyl-^{2}Glc-^{2}GlcA(OH-3β) Aglycone (**46**) Rha-^{2}Glc-^{2}GlcA(OH-3β) Bridgesigenin E (**47**) Xyl-^{2}Glc-^{2}GlcA(OH-3β) Bridgesigenin E (**47**) Rha-^{2}Glc-^{2}GlcA(OH-3β)	[8] [8] [8] [8] [8] [8] [8] [8]
Elaeocarpus hainanensis (Elaeocarpaceae)	Compound 2 +39.3, IR, ^{1}H, ^{13}C, 2D, ESIMS Compound 3 +63.7, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**204**) Glc(OH-2β) Aglycone (**205**) Glc(OH-3β)	[133] [133]
Entada rheedei (Mimosaceae)	Rheediinoside A -27.1, IR, ^{1}H, ^{13}C, 2D, ESIMS	Entagenic acid (**15**) Xyl-^{3} (OAc-6')Glc-^{6}(CH_3CONH-2')Glc(OH-3β) $\vert^{3}$ Xyl Apio(f)-^{3}Glc(CO_2H-28) $\vert^{2}$ Xyl	[134]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	Rheediinoside B -28.5, ^{1}H, ^{13}C, 2D, ESIMS	Entagenic acid (**15**) Xyl-^{3}Glc-^{6}(CH_3CONH-2')Glc(OH-3β) $\vert^{3}$ Xyl Apio(f)-^{3}Glc(CO_2H-28) $\vert^{2}$ Xyl	[134]
	Rheediinoside C -20.5, IR, ^{1}H, ^{13}C, 2D, ESIMS	Entagenic acid (**15**) Xyl-^{3}(OAc-6')Glc-^{6}(CH_3CONH-2')Glc(OH-3β) $\vert^{3}$ Xyl Xyl-^{3}Glc(CO_2H-28) $\vert^{2}$ Xyl	[134] [134]
	Rheediinoside D -24.0, IR, ^{1}H, ^{13}C, 2D, ESIMS	Entagenic acid (**15**) Xyl-^{2}Ara-^{6}(CH_3CONH-2')Glc(OH-3β) Apio(f)-^{3}Xyl-^{2}(OAc-6')Glc(CO_2H-28) $\vert^{2}$ Xyl	
Erylus formosus (Holothurioidea)	Eryloside R_1 ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**198**) Gal-^{3}Ara(OH-3β) $\vert^{2}$ Gal	[3]
	Eryloside T_1 ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**198**) Xyl-^{2}Glc-^{4}Gal-^{3}Gal-^{3}Ara(OH-3β) $\vert^{2}$ Gal	[3]
	Eryloside T_2 ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**198**) Ara-^{2}Glc-^{4}Gal-^{3}Ara-^{3}Ara(OH-3β) $\vert^{2}$ Gal	[3]
	Eryloside T_3 ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**198**) Glc-^{2}Glc-^{4}Gal-^{3}Ara-^{3}Ara(OH-3β) $\vert^{2}$ Gal	[3]
	Eryloside T_4 ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**196**) Xyl-^{2}Glc-^{4}Gal-^{3}Gal-^{3}Ara(OH-3β) $\vert^{2}$ Gal	[3]
	Eryloside T_5	Aglycone (**196**)	[3]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	^{1}H, ^{13}C, 2D, ESIMS Eryloside T_6 ^{1}H, ^{13}C, 2D, ESIMS	Ara-^{2}Glc-^{4}Gal-^{3}Ara-^{3}Ara(OH-3β) $\vert^{2}$ Gal Aglycone (**196**) Glc-^{2}Glc-^{4}Gal-^{3}Ara-^{3}Ara(OH-3β) $\vert^{2}$ Gal	[3]
Fadogia ancylantha (Rubiaceae)	Compound 1 221, -3.8, ^{1}H, ^{13}C, 2D, ESIMS Compound 2 229, -7.3, ^{1}H, ^{13}C, 2D, ESIMS Compound 3 233, -3.5, ^{1}H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Glc(OH-3β) Rha-^{2}Glc(CO_2H-28) Oleanolic acid (**6**) Glc(OH-3β) Apio(f)-^{2}Glc(CO_2H-28) Oleanolic acid (**6**) Glc(OH-3β) Glc-^{2}Gal(CO_2H-28)	[135] [135] [135]
Gleditsia caspica (Leguminosae)	Caspicaoside A -33.8, ^{1}H, ^{13}C, 2D, FABMS Caspicaoside B -29.1,^{1}H, ^{13}C, 2D, FABMS Caspicaoside C -18.4,^{1}H, ^{13}C, 2D, FABMS	Echinocystic acid (**10**) Xyl-^{2}Ara-^{6}Glc(OH-3β) [(6S),(2E)-2,6-dimethyl-6-hydroxy-2,7-octadienoyloxy-2’]Ara-^{2}Rha $\vert^{6}$ Glc(CO_2H-28) $\vert^{2}$ Xyl-^{3}Xyl-^{4}Rha Echinocystic acid (**10**) Xyl-^{2}Ara-^{6}Glc(OH-3β) [(6S),(2E)-6-hydroxy-2,6-dimethyl-6-hydroxy-2,7-octadienoyloxy-2’]Ara-^{2}[(6’S),(2’E)-2’,6’-dimethyl-2’,7’-octadienoyloxy]Rha $\vert^{6}$ Glc(CO_2H-28) $\vert^{2}$ Xyl-^{3}Xyl-^{4}Rha Echinocystic acid (**10**) Xyl-^{2}Ara-^{6}Glc(OH-3β) [(6S),(2E)-6’-hydroxy-2,6-dimethyl-2,7-octadienoyloxy-2’]Ara-^{2}[(6S),(2E)-6’-hydroxy-2’,6’-dimethyl-2,7-octadienoyloxy-2’][(6’’S),(2’’E)-6’’-hydroxy-2’’,6’’-dimethyl-2’’,7’’-octadienoyloxy]Rha	[136] [136] [136]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	Caspicaoside D -35.4, ^{1}H, ^{13}C, 2D, FABMS	^{6}| Glc(CO_2H-28) ^{2}| Xyl-^{3}Xyl-^{4}Rha Echinocystic acid (**10**) Xyl-^{2}Ara-^{6}Glc(OH-3β) [(6S),(2E)-6-hydroxy-2,6-dimethyl-2,6-dimethyl-2,7-octadienoyloxy-2']Rha ^{6}| Glc(CO_2H-28) ^{2}| Xyl-^{3}Xyl-^{4}Rha	[136]
Gordonia chrysandra (Theaceae)	Gordonoside A -3.5, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**131**) Ara-^{3}GlcA(OH-3β)	[137]
	Gordonoside B -3.5, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**114**) Ara-^{3}GlcA(OH-3β)	[137]
	Gordonoside C -5.9, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**136**) Ara-^{3}GlcA(OH-3β)	[137]
	Gordonoside D -23.0, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**137**) Ara-^{3}GlcA(OH-3β)	[137]
	Gordonoside E +1.2, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**115**) Ara-^{3}GlcA(OH-3β)	[137]
	Gordonoside F -5.9, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**116**) Ara-^{3}GlcA(OH-3β)	[137]
	Gordonoside G -1.0, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**113**) Ara-^{3}GlcA(OH-3β)	[137]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	Gordonoside H - 2.0, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**117**) Ara-^{3}GlcA(OH-3β)	[137]
	Gordonoside I 241-242, -2.7 UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**118**) Xyl-^{2}Ara-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[138]
	Gordonoside J 239-240, 4.8, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**129**) Xyl-^{2}Ara-^{3}GlcA(OH-3β) $\vert^{2}$ Gal	[138]
	Gordonoside K 226-227, -7.0, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Echinocystic acid (**10**) Ara-^{3}GlcA(OH-3β) Glc(CO_2H-28)	[138]
	Gordonoside L 234-235, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Echinocystic acid (**10**) Ara-^{2}Ara-^{3}GlcA(OH-3β) Glc(CO_2H-28)	[138]
	Gordonoside M 235-236, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Echinocystic acid (**10**) Rha-^{2}Ara-^{3}GlcA(OH-3β) Glc(CO_2H-28)	[138]
	Gordonoside N 238-239, -4.8, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Echinocystic acid (**10**) Xyl-^{2}Ara-^{3}GlcA(OH-3β) $\vert^{2}$ Glc Glc(CO_2H-28)	[138]
	Gordonoside O 232-233, -7.3, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Echinocystic acid (**10**) Xyl-^{2}Ara-^{3}GlcA(OH-3β) $\vert^{2}$ Gal Glc(CO_2H-28)	[138]
	Gordonoside P 227-228, -12.5, UV, IR, ^{1}H, ^{13}C, 2D, ESIMS	Echinocystic acid (**10**) Xyl-^{3}GlcA(OH-3β) $\vert^{2}$ Rha-^{3}Glc Glc(CO_2H-28)	[138]
Gypsophila	Gypsosaponin A	Quillaic acid (**12**)	[139]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
(Caryophyllaceae)	-5.0, IR, ^{1}H, ^{13}C, 2D, ESIMS	Xyl-^{3}GlcA(OH-3β) |^{2} Gal Ara-^{2}Ara-^{3}Xyl-^{4}Rha-^{2}Fuc(CO_2H-28)	
	Gypsosaponin B -1.6, IR, ^{1}H, ^{13}C, 2D, ESIMS	Gypsogenin (**14**) Xyl-^{3}(OMe-6')GlcA(OH-3β) |^{2} Glc Xyl-^{4}Rha-^{2}Fuc(CO_2H-28) |^{2} Gal	[139]
	GypsosaponinC +14.9, IR, ^{1}H, ^{13}C, 2D, ESIMS	Gypsogenic acid (**11**) Glc(CO_2H-23) Glc-^{6}Glc(CO_2H-28) |^{3} Glc	[139]
G.perfoliata	Compound 1 +0.9, IR, ^{1}H, ^{13}C, 2D, ESIMS	Quillaic acid (**12**) Xyl-^{3}GlcA(OH-3β) |^{2} Gal (OAc-3',4')Quin-^{4}Fuc(CO_2H-28) |^{2} Xyl-^{3}Xyl-^{3}Xyl-^{4}Rha	[140]
	Compound 2 +5.1, IR, ^{1}H, ^{13}C, 2D, ESIMS	Gypsogenin (**14**) Xyl-^{3}GlcA(OH-3β) |^{2} Gal (OAc-3',4')Quin-^{4}Fuc(CO_2H-28) |^{2} Xyl-^{4}Rha	[140]
	Compound 3 -4.0, IR, ^{1}H, ^{13}C, 2D, ESIMS	Gypsogenin (**14**) Xyl-^{3}GlcA(OH-3β) |^{2} Gal (OAc-3',4')Quin-^{4}Fuc(CO_2H-28) |^{2} Ara-^{3}Xyl-^{4}Rha	[140]
	Compound 4 IR, ^{1}H, ^{13}C, 2D, ESIMS	Gypsogenin (**14**) Xyl-^{3}GlcA(OH-3β) |^{2}	[140]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
		Gal [4-*O*-trans-p-methoxy-cinnamoyloxy]Fuc(CO_2H-28) $\vert^2$ Xyl-^{4}Rha $\vert^3$ Glc	
	Compound 5 IR, ^{1}H, ^{13}C, 2D, ESIMS	Gypsogenin (**14**) Xyl-^{3}GlcA(OH-3β) $\vert^2$ Gal [4-*O*-cis-p-methoxy-cinnamoyloxy]Fuc(CO_2H-28) $\vert^2$ Xyl-^{4}Rha $\vert^3$ Glc	[140]
	Compound 6 IR, ^{1}H, ^{13}C, 2D, ESIMS	Gypsogenin (**14**) Xyl-^{3}(OMe-6')GlcA(OH-3β) $\vert^2$ Gal [4-*O*-trans-p-methoxy-cinnamoyloxy]Fuc(CO_2H-28) $\vert^2$ Xyl-^{4}Rha $\vert^3$ Glc	[140]
	Compound 7 IR, ^{1}H, ^{13}C, 2D, ESIMS	Gypsogenin (**14**) Xyl-^{3}(OMe-6')GlcA(OH-3β) $\vert^2$ Gal [4-*O*-cis-p-methoxy-cinnamoyloxy]Fuc(CO_2H-28) $\vert^2$ Xyl-^{4}Rha $\vert^3$ Glc	[140]
	Compound 8 IR, ^{1}H, ^{13}C, 2D, ESIMS	Gypsogenin (**14**) Xyl-^{3}(OMe-6')GlcA(OH-3β) $\vert^2$ Gal [3-*O*-trans-p-methoxy-cinnamoyloxy]Fuc(CO_2H-28) $\vert^2$	[140]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	Compound 9 IR, ^{1}H, ^{13}C, 2D, ESIMS	Xyl-^{4}Rha $\vert^{3}$ Glc Gypsogenin (**14**) Xyl-^{3}(OMe-6')GlcA(OH-3β) $\vert^{2}$ Gal [3-*O*-cis-p-methoxy-cinnamoyloxy]Fuc(CO_2H-28) $\vert^{2}$ Xyl-^{4}Rha $\vert^{3}$ Glc	[140]
Helianthus annus (Asteraceae)	Helianthoside 4 239-243, -48.2, IR, ^{1}H, ^{13}C, 2D, ESIMS	Caulophyllogenin (**16**) Xyl-^{4}Glc(OH-3β) $\vert^{3}$ Rha Glc-^{4}Rha-^{2}Xyl(CO_2H-28)	[141]
	Helianthoside 5 222-227, -46.7, IR, ^{1}H, ^{13}C, 2D, ESIMS	Echinocystic acid (**10**) Xyl-^{4}Glc(OH-3β) $\vert^{3}$ Rha Rha-^{2}Glc(CO_2H-28)	[141]
Hemsleya chinensis (Cucurbitaceae)	Xuedanglycoside A +108.4, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**206**) Glc(OH-2β)	[142]
	Xuedanglycoside B +98.0, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**207**) Glc(OH-2β)	[142]
	Xuedanglycoside C +34.8, IR, ^{1}H, ^{13}C, 2D, FABMS	Oleanolic acid (**6**) Xyl-^{6}Glc(CO_2H-28)	[142]
Holothuria axiloga (Microthele)	Arguside F 238-240, -1.2, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**194**) Glc-^{4}Xyl(OH-3β) $\vert^{2}$ Glc(MeO-3')-^{3}Glc-^{4}Quin	[4]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	ESIMS		[4]
	Impatienside B	Aglycone (**195**)	
		Glc-^{4}Xyl(OH-3β)	
	206-208, -7.8, ^{1}H, ^{13}C, 2D, ESIMS	$\vert^2$	
		Glc(MeO-3')-^{3}Glc-^{4}Quin	[4]
	Pervicoside D	Aglycone (**183**)	
	170-172, -4.0, ^{1}H, ^{13}C, 2D, ESIMS	Glc-^{4}Xyl(OH-3β)	
		$\vert^2$	
		Glc(MeO-3')-^{3}Glc-^{4}Quin	
H.scabra	Scabraside A	Aglycone (**190**)	[5]
	234–236, −11.3, IR, ESIMS	(OMe-3')Glc-^{3}Glc-^{4}Quin-^{2}(-SO_3Na-4')Xyl(OH-3β)	
	Scabraside B	Aglycone (**193**)	[5]
	236–238, −14.9, IR, ESIMS	(OMe-3')Glc-^{3}Glc-^{4}Quin-^{2}(-SO_3Na-4')Xyl(OH-3β)	
Hydrocotyle bonariensis (Umbellferae)	Bonarienoside A	Aglycone (**102**)	[143]
	-26.4, ^{1}H, ^{13}C, 2D, ESIMS	Ara-^{3}GlcA(OH-3β)	
		$\vert^2$	
		Glc	
	Bonarienoside B	Aglycone (**103**)	[143]
	-8.5, ^{1}H, ^{13}C, 2D, ESIMS	Ara-^{3}GlcA(OH-3β)	
		$\vert^2$	
		Glc	
	Bonarienoside C	Aglycone (**66)**	[143]
	-13.0, ^{1}H, ^{13}C, 2D, ESIMS	Ara-^{3}GlcA(OH-3β)	
		$\vert^2$	
		Glc	
	Bonarienoside D	Aglycone (**67**)	[143]
	-15.3, ^{1}H, ^{13}C, 2D, ESIMS	Ara-^{3}GlcA(OH-3β)	
		$\vert^2$	
		Glc	
	Bonarienoside E	Aglycone (**104**)	[143]
	^{1}H, ^{13}C, 2D, ESIMS	Ara-^{3}GlcA(OH-3β)	
		$\vert^2$	
		Glc	
H.sibthorpioides	Hydrocosisaponin A	Aglycone (**68**)	[144]
	-1.6, IR, ^{1}H, ^{13}C, 2D, FABMS	Ara-^{6}Glc(OH-3β)	
		$\vert^2$	
		Glc	
	Hydrocosisaponin	Aglycone (6**9**)	[144]

Table 7: Continued

Source (1)	Saponin mp,$[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	B -2.7, IR, ^1H, ^{13}C, 2D, FABMS	Ara-^{6}Glc(OH-3β) |^2 Glc	
	Hydrocosisaponin C -6.8, IR, ^1H, ^{13}C, 2D, FABMS	Aglycone (**70**) Ara-^{6}Glc(OH-3β) |^2 Glc	[144]
	Hydrocosisaponin D -2.8, IR, ^1H, ^{13}C, 2D, FABMS	Aglycone (**70**) Ara-^{6}Glc(OH-3β) |^4 |^2 Glc Glc	[144]
	Hydrocosisaponin E -1.9, IR, ^1H, ^{13}C, 2D, FABMS	Aglycone (**71**) Ara-^{6}Glc(OH-3β) |^4 |^2 Glc Glc	[144]
	Hydrocosisaponin F -4.1, IR, ^1H, ^{13}C, 2D, FABMS	Aglycone (**72**) Ara-^{6}Glc(OH-3β) |^4 |^2 Glc Glc	[144]
Ilex asprella (Aquifoliaceae)	Asprellanoside A -2.15, IR, ^1H, ^{13}C, 2D, FABMS	Pomolic acid (**142**) (SO_3H-3')Xyl(OH-3β) Glc(CO_2H-28)	[145]
	Asprellanoside B -3.42, IR, ^1H, ^{13}C, 2D, FABMS	Ilexgenin B (**158**) (SO_3H-3')Xyl(OH-3β)	[145]
	Ilexasoside A +10.3, IR, ^1H, ^{13}C, 2D, ESIMS	Pomolic acid (**142**) (6'-OMe)GlcA(OH-3β)	[146]
	IlexasosideB +2.8, IR, ^1H, ^{13}C, 2D, ESIMS	Pomolic acid (**142**) (SO_3Na-3')(6'-OMe)GlcA(OH-3β)	[146]
	Ilexasoside C -11.4,IR, ^1H, ^{13}C, 2D, ESIMS	Pomolic acid (**142**) (6'-OMe)GlcA(OH-3β) Glc(CO_2H-28)	[146]
	Ilexasoside D -8.6, IR, ^1H, ^{13}C, 2D, ESIMS	Pomolic acid (**142**) (SO_3Na-3')(6'-OMe)GlcA(OH-3β) Glc(CO_2H-28)	[146]
	Ilexasoside E 224-226,+104.5, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**151**) (6'-OMe)GlcA(OH-3β) Glc(CO_2H-28)	[146]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	Ilexasoside F 213-215,+104.5, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**154**) (6'-OMe)GlcA(OH-3β) Glc(CO_2H-28)	[146]
	Ilexasoside G 212-214, -29.5, IR,^{1}H,^{13}C,2D, ESIMS	Aglycone (**157**) (6'-OMe)GlcA(OH-3β) Glc(CO_2H-28)	[146]
	Ilexasoside H 222-223, -8.0, IR,^{1}H,^{13}C,2D, ESIMS	(**223**)	[146]
Impatiens siculifer (Balsaminaceae)	Impatienoside A -10.5, IR, ^{1}H, ^{13}C, 2D,ESIMS,	Aglycone (**73**) Gal-^{2}GlcA(OH-3β)	[147]
	Impatienoside B +33.4, IR, ^{1}H, ^{13}C and 2D, ESIMS,	Aglycone (**54**) GlcA(OH-3β) Glc-^{3}Ara(OH-22β)	[147]
	Impatienoside C +12.1, IR, ^{1}H, ^{13}C and 2D, ESIMS,	Aglycone (**54**) Rha-^{2}Ara-^{2}GlcA(OH-3β) Glc-^{3}Ara(OH-22β)	[147]
	Impatienoside D +12.0, IR, ^{1}H, ^{13}C and 2D, ESIMS,	Aglycone (**54**) Rha-^{2}Gal-^{2}GlcA(OH-3β) Glc-^{3}Ara(OH-22β)	[147]
	Impatienoside E +11.8, IR, ^{1}H, ^{13}C and 2D, ESIMS,	Aglycone (**54**) Glc-^{2}Gal-^{2}GlcA(OH-3β) Glc-^{3}Ara(OH-22β)	[147]
	Impatienoside F IR, ^{1}H, ^{13}C and 2D, ESIMS, Impatienoside G -31.0, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**54**) Xyl-^{2}Gal-^{2}GlcA(OH-3β) Glc-^{3}Ara(OH-22β) Echinocystic acid (**10**) GlcA(OH-3β) Xyl-^{4}Rha-^{2}Ara(CO_2H-28)	[147]
Isolatocereus dumortieri Tenocereus	Compound 1	Dumortierigenin (**23**) Rha-^{2}Glc-^{2}(MeO-6')GlcA(OH-3β)	[23]
	Compound 2	(**225**)	[23]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
alamosensis (Pereskioideae)	Compound 3	(**224**)	[23]
	Compound 4	Gummosogenin (**22**) Glc-^{3}GlcA(OH-3β) $\vert^{2}$ Glc	[23]
	Compound 5 ^{1}H, ^{13}C, 2D, FAMMS	Gummosogenin (**22**) Glc-^{3}(MeO-6')GlcA(OH-3β) $\vert^{2}$ Glc	[23]
Juglans sinensis (Juglanceae)	Compound 3 +39.6,FABMS	Aglycone (**143**) Glc(CO_2H-28)	[148]
	Compound 1 +39.8, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**75**) Glc(CO_2H-28)	[149]
	Compound 3 +28.8, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**140**) Glc(CO_2H-28)	[149]
	Compound 4 +28.9, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**144**) Glc(CO_2H-28)	[149]
Kalopanax pictus (Araliaceae)	Triterpenoid saponin +55.3, IR, ^{1}H, ^{13}C, 2D, ESITOFMS	Aglycone (**59**) Glc(CO_2H-28)	[150]
	Triterpenoid saponin +11.0, IR, ^{1}H, ^{13}C, 2D, ESITOFMS	Hederagenin (**8**) (OAc-2', 3')Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[150]
	Triterpenoid saponin +6.3, IR, ^{1}H, ^{13}C, 2D, ESITOFMS	Hederagenin (**8**) (OAc-3', 4')Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[150]
	Compound 1 -23.3, IR, ^{1}H, ^{13}C, 2D, ESITOFMS	Aglycone (**64**) GlcA(OH-3β)	
	Compound 2	Aglycone (**80**)	[151]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	-12.8, IR, ^{1}H, ^{13}C, 2D, ESITOFMS	GlcA(OH-3β) Glc(CO_2H-28)	
	Compound 3 +4.5, IR, ^{1}H, ^{13}C, 2D, ESITOFMS	Hederagenin (**8**) Gal-^{3}Ara(OH-3β) Glc-^{6}Glc(CO_2H-28)	[151]
Lipastrotethya rhaphoxea (Dictyonellidae)	Sarasinoside N 10.0, UV, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**199**) (NHAc-2')Gal-^{4}Xyl(OH-3β) $\vert^{2}$ (NHAc-2')Glc	[152]
	Sarasinoside O -2.6, UV, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**202**) (NHAc-2')Gal-^{4}Xyl(OH-3β) $\vert^{2}$ Glc-^{2}Glc-^{6}(NHAc-2')Glc	[152]
	Sarasinoside P -6.0, UV, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**201**) (NHAc-2')Gal-^{4}Xyl(OH-3β) $\vert^{2}$ Glc-^{2}Glc-^{6}(NHAc-2')Glc	[152]
	Sarasinoside Q -29.1, UV, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**197**) (NHAc-2')Gal-^{4}Xyl(OH-3β) $\vert^{2}$ Glc-^{2}Glc-^{6}(NHAc-2')Glc	[152]
	Sarasinoside R -12.4, UV, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**203**) (NHAc-2')Gal-^{4}Xyl(OH-3β) $\vert^{2}$ Glc-^{2}Glc-^{6}(NHAc-2')Glc	
Lysimachia clethroides (Primulaceae)	Clethroidoside A +2.6, IR, ^{1}H, ^{13}C, 2D, ESI-TOFMS	Aglycone (**48**) Glc-^{4}Ara(OH-3β) $\vert^{2}$ Glc	[153]
	Clethroidoside B -37.2, IR, ^{1}H, ^{13}C, 2D, ESI-TOFMS	Aglycone (**72**) Glc-^{4}Ara(OH-3β) $\vert^{2}$ Glc	[153]
	Clethroidoside C -30.5, IR, ^{1}H, ^{13}C, 2D, ESI-TOFMS	Aglycone (**166**) Rha-^{2}Glc-^{4}Ara(OH-3β) $\vert^{2}$ Glc	[153]
	Clethroidoside D -55.4, IR, ^{1}H, ^{13}C, 2D, ESI-TO	Aglycone (**166**) Xyl-^{2}Glc-^{4}Ara(OH-3β) $\vert^{2}$	[153]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	FMS	Glc	
	Clethroidoside E -23.0, IR, ^{1}H, ^{13}C, 2D, ESI-TOFMS	Aglycone (**164**) Rha-^{2}Glc-^{4}Ara(OH-3β) $\vert^{2}$ (OAc-6')Glc	[153]
	Clethroidoside F -12.5, IR, ^{1}H, ^{13}C,2D, ESI-TOFMS	Aglycone (**163**) Xyl-^{2}Glc-^{4}Ara(OH-3β) $\vert^{2}$ Glc	[153]
	Clethroidoside G -40.3, IR, ^{1}H, ^{13}C, 2D, ESI-TOFMS	Aglycone (**138**) Glc-^{4}Ara(OH-3β) $\vert^{2}$ Glc	[153]
	Clethroidoside H +30.8, IR, ^{1}H, ^{13}C, 2D, ESI-TOFMS	Aglycone (**141**) Glc(OH-21β) Glc(OH-30)	[153]
L.heterogenea	Heterogenoside A IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**62**) Glc-^{2}Ara(OH-3β)	[154]
	Heterogenoside B IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**62**) Xyl-^{2}Glc-^{2}Ara(OH-3β)	[154]
	Heterogenoside C IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**62**) Glc-^{4}Ara(OH-3β) $\vert^{2}$ Glc	[154]
	Heterogenoside D IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**62**) Xyl-^{2}Glc-^{4}Ara(OH-3β) $\vert^{2}$ Glc	[154]
Machilus yaoshansis (Lauraceae)	Compound 1 -14.8, IR, ^{1}H, ^{13}C, 2D	Aglycone (**160**) Xyl-^{3}Ara(OH-3β) $\vert^{2}$ Rha	[155]
	Compound 2 +7.1, IR, ^{1}H, ^{13}C, 2D	Aglycone (**161**) Xyl-^{3}Ara(OH-3β) $\vert^{2}$ Rha	[155]
	Compound 3	Aglycone (**161**)	[155]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	+13.8, IR, ^{1}H, ^{13}C, 2D	Xyl-^{3}Glc(OH-3β)	
	Compound 8 +6.0, IR, ^{1}H, ^{13}C, 2D	Aglycone (**159**) Xyl-^{3}Ara(OH-3β) $\vert^{2}$ Rha	[155]
	Compound 9 -13.6, IR, ^{1}H, ^{13}C, 2D	Aglycone (**159**) Xyl-^{3}Ara(OH-3β) $\vert^{2}$ Rha Glc(OH-21β)	[155]
	Compound 10 +20.9, IR, ^{1}H, ^{13}C, 2D	Aglycone (**162**) Xyl-^{3}Ara(OH)	[155]
	Compound 11 +2.2, IR, ^{1}H, ^{13}C, 2D	Aglycone (**162**) Xyl-^{3}Glc(OH-3β) $\vert^{2}$ Rha Glc(OH-21β)	[155]
	Compound 12 -5.3, IR, ^{1}H, ^{13}C, 2D	Aglycone (**159**) Xyl- ^{3}(OAc-6')Glc(OH-3β) $\vert^{2}$ Rha	[155]
	Compound 13 -9.3, IR, ^{1}H, ^{13}C, 2D	Aglycone (**159**) Xyl-^{3}(OAc-6')Glc(OH-3β) $\vert^{2}$ Rha Glc-^{6}Glc(OH-21β)	[155]
Medicago arabica (Fabaceae)	Saponin 1 229-231, +37.5, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**76**) Ara-^{2}GlcA(OH-3β) Glc(CO_2H-28)	[156]
	Saponin 2 232-233, +11.6, ^{1}H, ^{13}C, 2D, ESIMS	Queretaraic acid (**9**) Ara-^{2}GlcA(OH-3β) Glc(CO_2H-28)	[156]
	Saponin 3 228-229, +33.3, ^{1}H, ^{13}C, 2D,	Aglycone (**76**) GlcA(OH-3β) Ara-^{2}Glc(CO_2H-28)	[156]
	Saponin 4	Queretaraic acid (**9**)	[156]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	231-233, +10.5, ^{1}H, ^{13}C, 2D, ESIMS	GlcA(OH-3β) Ara-^{2}Glc(CO_2H-28)	
	Saponin 5 214-215, +34.5, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**76**) GlcA(OH-3β) Glc(CO_2H-28)	[156]
Meryta denhamii (Araliaceae)	Compound 1 +1.12, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**78**) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[157]
	Compound 2 +15.2, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**78**) Glc-^{6}Glc(CO_2H-28)	[157]
	Compound 3 +39.9,^{1}H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Glc-^{4}Glc-^{3}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[157]
	Compound 4 +42.5,^{1}H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Glc-^{3}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[157]
	Compound 5 +23.6, ^{1}H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Glc-^{2}GlcA(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[157]
	Compound 6 +40.3,^{1}H, ^{13}C, 2D, ESIMS	Echinocystic acid (**10**) Glc-^{2}GlcA(OH-3β) Glc(CO_2H-28)	[157]
	Compound 7 +36.1,^{1}H, ^{13}C, 2D, ESIMS	Echinocystic acid (**10**) Glc-^{4}Glc-^{3}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[157]
	Compound 8 +45.1,^{1}H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6)** Glc-^{4}Glc-^{3}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[157]
Nigella sativa (Ranunculaceae)	Saponin 1 295, +21, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**77**) Xyl-^{2}Rha-^{4}Glc(OH-3β)	[158]
Patrinia scabiosaefolia (Valerianaceae)	Compound 1 -4.9, IR, ^{1}H, ^{13}C, 2D, ESIMS	(**3**)	[9]
	Compound 2 -6.9, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**139**) Rha-^{2}Xyl(OH-3β)	[9]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	Compound 3 -30.8, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**139**) Xyl-^{2}Glc(OH-3β)	[9]
	Compound 4 -16.3, IR, ^{1}H, ^{13}C, 2D, ESIMS	Oleanolic acid (**6**) Glc-^{4}Xyl-^{2}Rha-^{2}Xyl(OH-3β) Glc(CO_2H-28)	[9]
Pentacta quadrangularis (Cucumaridae)	Pentactaside I 232-234, -17.4, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**186**) Xyl-^{4}Quin-^{2}($NaSO_3$-4')Xyl(OH-3β)	[159]
	Pentactaside II 230-233,-17.6, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**178**) Xyl-^{4}Quin-^{2}($NaSO_3$-4')Xyl(OH-3β)	[159]
	Pentactaside III 228-230, -36.1, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**186**) Quin-^{2}($NaSO_3$-4')Xyl(OH-3β)	[159]
Physena sessiliflora (Capparidaceae)	Physenoside S1 +17.8, ^{1}H, ^{13}C, 2D, FABMS	Bayogenin(**18**) Glc(OH-3β) Ara-^{3}Ara(CO_2H-28) $\vert^{2}$ Xyl-^{4}Rha	[6]
	Physenoside S2 +18.8, ^{1}H, ^{13}C, 2D, FABMS	Bayogenin(**18**) Glc(OH-3β) Apio(f)-^{3}Ara(CO_2H-28) $\vert^{2}$ Xyl-^{4}Rha	[6]
	Physenoside S3 +12.7, ^{1}H, ^{13}C, 2D, FABMS	Bayogenin(**18**) Glc(OH-3β) Rha-^{4}Ara(CO_2H-28) $\vert^{2}$ $\vert^{3}$ Xyl-^{4}Rha Ara	[6]
	Physenoside S4 +16.6,^{1}H, ^{13}C, 2D, FABMS	Bayogenin(**18**) Glc -^{6}Glc(OH-3β) Rha-^{4}Ara(CO_2H-28) $\vert^{2}$ $\vert^{3}$ Xyl-^{4}Rha Ara	[6]
	Physenoside S5 +1.3, ^{1}H, ^{13}C,	Bayogenin(**18**) Glc(OH-3β)	[6]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	2D, FABMS	[{(8-oxo-16β-hydroxy)oxy} hexadecanoyloxy]Xyl-^{4}Ara(CO_2H-28) ^{2}| ^{3}| Xyl-^{4}Rha Apio(f)	
	Physenoside S6 +10.2, ^{1}H, ^{13}C, 2D, FABMS	Bayogenin(**18**) Glc(OH-3β) [{(9-oxo-16β-hydroxy)} hexadecanoyloxy]Xyl-^{4}Ara(CO_2H-28) ^{2}| ^{3}| Xyl-^{4}Rha Apio(f)	[6]
	Physenoside S7 +5.2, ^{1}H, ^{13}C, 2D FABMS	Aglycone (**32**) Glc(OH-3β) [{(8-oxo-16β-hydroxy)} hexadecanoyloxy]Xyl-^{4}Ara(CO_2H-28) ^{2}| ^{3}| Xyl-^{4}Rha Apio(f)	[6]
	Physenoside S8 +1.2, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**32**) Glc(OH-3β) [{(9-oxo-16β-hydroxy)} hexadecanoyloxy]Xyl-^{4}Ara(CO_2H-28) ^{2}| ^{3}| Xyl-^{4}Rha Ara	[6]
Pithecellobium lucidum (Mimosaceae)	Pithelucoside A -32.4, IR, ^{1}H, ^{13}C, 2D,FABMS,	Aglycone (**105**) Xyl-^{2}Fuc-^{6}Glc(OH-3β) Ara(f)-^{4}Rha-^{2}Glc(CO_2H-28) ^{3}| Quin	[160]
	Pithelucoside B –23.7, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**106**) Xyl-^{2}Fuc-^{6}Glc(OH-3β) Ara(f)-^{4}Rha-^{2}Glc(CO_2H-28) ^{3}| Glc	[160]
	Pithelucoside C –13.5, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**107**) Xyl-^{2}Fuc-^{6}Glc(OH-3β) Ara(f)-^{4}Rha-^{2}Glc(CO_2H-28) ^{3}| Glc	[160]
Platycodon grandiflorumon (Campanulacea	Platyconic acid A -23.4, IR, ^{1}H, ^{13}C,2D,	Aglycone (**79**) Glc-^{6}Glc(OH-3β) Apio(f)-^{3}Xyl-^{4}Rha-^{2}Ara(CO_2H-28)	[161]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
e)	MALDITOFMS		
	Deapio-platyconic acid B lactone -29.2, IR, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**79**) Glc-^{6}Glc(OH-3β) Xyl-^{4}Rha-^{2}Ara(CO_2H-28)	[161]
	Deapio-platycodin D_2-14.4, IR, ^1H, ^{13}C, 2D, ESIMS	Platycodigenin (**7**) Glc-^{3}Glc(OH-3β)Xyl-^{4}Rha-^{2}Ara(CO_2H-28)	[161]
Polygala tenuifolia (Polygalacea)	Onjisaponin V +15.0, ^1H, ^{13}C, 2D	Presenegenin (**13**) Glc(OH-3β) (3',4',5'-trimethoxycinnamoyloxy-3')Fuc(CO_2H-28) $\vert^2$ Gal-^{4}Xyl-^{4}Rha $\vert^3$ (3-hydroxy-3-methylglutaroyloxy-5')Apio(f)	[162]
	Onjisaponin W +25.0, ^1H, ^{13}C, 2D	Presenegenin (**13**) Glc-(OH-3β) (3',4',5'-trimethoxycinnamoyloxy-3')Fuc(CO_2H-28) $\vert^2$ Ara-^{3}Xyl-^{4}Rha $\vert^3$ (3-hydroxy-3-methylglutaroyloxy-5')Apio(f)	[162]
	Onjisaponin X +4.0, ^1H, ^{13}C, 2D	Presenegenin (**13**) Glc-(OH-3β) (3',4',5'-trimethoxycinnamoyloxy-4')Fuc(CO_2H-28) $\vert^2$ $\vert^3$ Ara-^{3}Xyl-^{4}Rha Gal $\vert^3$ (3-hydroxy-3-methylglutaroyloxy-5')Apio(f)	[162]
	Onjisaponin Y -4.0, ^1H, ^{13}C, 2D	Presenegenin (**13**) Glc-(OH-3β) (3',4',5'-trimethoxycinnamoyloxy-4')Fuc(CO_2H-28) $\vert^2$ Gal-^{4}Xyl-^{4}Rha $\vert^3$ (3-hydroxy-3-methylglutaroyloxy-5')Apio(f)	[162]
	Onjisaponin Z	Presenegenin (**13**)	[162]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	-5.0, ^{1}H, ^{13}C, 2D	Glc-(OH-3β) (p-trimethoxycinnamoyloxy-4')Fuc(CO_2H-28) ^{2}| ^{3}| Gal-^{4}Xyl-^{4}Rha Rha	
	Onjisaponin V_g -9.0, ^{1}H, ^{13}C, 2D	Presenegenin (**13**) Glc-(OH-3β) Rha-^{3}(3',4',5-triimethoxy-4')Fuc(CO_2H-28) ^{2}| Xyl-^{4}Rha	[162]
Rubus ellipticus (Rosaceae)	Rubuside A +102.0, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**146**) Glc(CO_2H-28)	[163]
	Rubuside B +149.8, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**147**) Glc(CO_2H-28)	[163]
	Rubuside C +88.4, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**149**) Glc(CO_2H-28)	[163]
	Rubuside D +5.2, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**155**) Glc(CO_2H-28)	[163]
	Rubuside E +1.4, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**156**) Glc(CO_2H-28)	[163]
	Rubuside F +12.0, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**149**) Glc(CO_2H-28)	[163]
	Rubuside G -9.6, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**153**) Glc(CO_2H-28)	[163]
	Rubuside H -58.4, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**152**) Glc(CO_2H-28)	[163]
	Rubuside I -0.4, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**173**) Glc(CO_2H-28)	[163]
	Rubuside J -3.0, IR, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**150**) Glc(CO_2H-28)	[163]
Sapindus rarak (Sapindaceae)	Rarasaponin I +16.8,^{1}H, ^{13}C, 2	Hederagenin (**8**) (OAc-2')Ara-^{3}Rha-^{2}Ara(OH-3β)	[164]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	2D, FABMS Rarasaponin II +24.1, ^{1}H, ^{13}C, 2D, FABMS	Hederagenin (**8**) (OAc-3')Ara-^{3}Rha-^{2}Ara(OH-3β)	[164]
	Rarasaponin III +31.1,^{1}H, ^{13}C, 2D, FABMS	Hederagenin (**8**) (OAc-4')Ara-^{3}Rha-^{2} Ara(OH-3β)	[164]
	Rarasaponin IV +25.6,^{1}H, ^{13}C, 2D, FABMS	Hederagenin (**8**) (OAc-3', 4')Ara-^{3}Rha-^{2} (OAc-4')Ara(OH-3β)	[165]
	Rarasaponin V -8.3,^{1}H, ^{13}C, 2D, FABMS	Hederagenin (**8**) (OAc-3')Apio(f)-^{3}Rha-^{2}Ara(OH-3β)	[165]
	Rarasaponin VI +1.9,^{1}H, ^{13}C, 2D, FABMS	Hederagenin (**8**) (OAc-2', 4')Xyl-^{3}Rha-^{2}Ara(OH-3β)	[165]
	Raraoside A +1.8, ^{1}H, ^{13}C, 2D, FABMS	Aglycone (**74**) Rha-^{6}Glc(OH-3β)	[164]
Sideroxylon foetidissimum (Sapotaceae)	Saponin 1 ^{1}H, ^{13}C, 2D, ESIMS	16α-hydroxy protobassic acid (**20**) Glc-^{6}Glc(OH-3β) Xyl-^{4}Xyl-^{4}Rha-^{2}Ara(CO_2H-28) ^{3} Rha	[166]
	Saponin 2 ^{1}H, ^{13}C, 2D, ESIMS	16α-hydroxy protobassic acid (**20**) Glc(OH-3β) Xyl-^{4}Xyl-^{4}Rha-^{2}Ara(CO_2H-28) ^{3} Rha	[166]
	Saponin 3 ^{1}H, ^{13}C, 2D, ESIMS	16α-hydroxy protobassic acid (**20**) Glc-^{6}Glc(OH-3β) Rha-^{3}Xyl-^{4}Rha-^{2}Ara(CO_2H-28) ^{3} Apio(f)	[166]
	Saponin 5 ^{1}H, ^{13}C, 2D, ESIMS	16α-hydroxy protobassic acid (**20**) Glc(OH-3β) Rha-^{4}Xyl-^{4}Rha-^{2}Ara(CO_2H-28) ^{3} Apio(f)	[166]
	Saponin 6 ^{1}H, ^{13}C, 2D,	16α-hydroxy protobassic acid (**20**) Apio(f)-^{3}Glc(OH-3β)	[166]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
	ESIMS	Xyl-^{4}Xyl-^{4}Rha-^{2}Ara(CO_2H-28) ^{3} Rha	
Stauntonia chinensis (Lardizabalaceae)	Yemuoside YM_{17} IR, ^{1}H, ^{13}C, 2D, ESIITMS	Aglycone (**80**) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[22]
	Yemuoside YM_{18} IR, ^{1}H, ^{13}C, 2D, ESITMS	Aglycone (**82**) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[22]
	Yemuoside YM_{19} IR, ^{1}H, ^{13}C, 2D, ESIITMS	Aglycone (**81**) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[22]
	Yemuoside YM_{20} IR, ^{1}H, ^{13}C, 2D, ESIITMS	29-hydroxy oleanolic acid (**26**) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[22]
	Yemuoside YM_{26} +3.1, IR, ^{1}H, ^{13}C, 2D, ESIITMS	Akebonic acid (**17**) Xyl-^{3}Ara(OH-3β) ^{2} Rha Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[167]
	Yemuoside YM_{27} +7.9, IR, ^{1}H, ^{13}C, 2D, ESIITMS	Akebonic acid (**17**) Gal-^{2}Rha-^{2}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[167]
	Yemuoside YM_{28} +9.9, IR, ^{1}H, ^{13}C, 2D, ESIITMS	Aglycone (**51**) Ara-^{3}Ara(OH-3β) ^{2} Rha Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[167]
	Yemuoside YM_{29} +13.7, IR, ^{1}H, ^{13}C, 2D, ESIITMS	Aglycone (**51**) Xyl-^{3}Ara(OH-3β) ^{2} Rha Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[167]
	Yemuoside YM_{30} +17.4, IR, ^{1}H, ^{13}C, 2D, ESIITMS	Aglycone (**51**) Ara-^{3}Ara(OH-3β) ^{2} Rha Glc-^{6}Glc(CO_2H-28)	[167]
	YemuosideYM$_{31}$ +10.2, IR, ^{1}H, ^{13}C, 2D, ESIITMS	Aglycone (**51**) Xyl-^{3}Ara(OH-3β) ^{2}	[167]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	Yemuoside YM_{32} -6.6, IR, ^1H, ^{13}C, 2D, ESIITMS	Rha Glc-^{6}Glc(CO_2H-28) Hederagenin (**8**) Ara-^{3}Ara(OH-3β) $\vert^2$ Rha Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[167]
	Yemuoside YM_{33}6.2, IR, ^1H, ^{13}C, 2D, ESIITMS	Hederagenin (**8**) Xyl-^{3}Ara(OH-3β) $\vert^2$ Rha Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[167]
	Yemuoside YM_{34}2.0, IR, ^1H, ^{13}C, 2D, ESIITMS	Hederagenin (**8**) Gal-^{2}Rha-^{2}Ara(OH-3β) Rha-^{4}Glc-^{6}Glc(CO_2H-28)	[167]
	Yemuoside YM_{35} +2.7, IR, ^1H, ^{13}C, 2D, ESIITMS	Hederagenin (**8**) Ara-^{3}Ara(OH-3β) $\vert^2$ Rha Glc-^{6}Glc(CO_2H-28)	[167]
Staurocucumis liouvillei (Cucumaridae)	Liouvilloide A_1 228-230, -48, ^1H, ^{13}C, 2D, ESIFTMS	Aglycone (**185**) (OMe-3')Glc-^{3}(SO_3Na-6')Glc-^{4}Quin-^{2}(SO_3Na-4')Xyl(OH-3β)	[20]
	Liouvilloide A_2 227-239, -53, ^1H, ^{13}C, 2D, ESIFTMS	Aglycone (**185**) (OMe-3')Quin-^{3}(SO_3Na-6')Glc-^{4}Quin-^{2}(SO_3Na-4')Xyl(OH-3β)	[20]
	Liouvilloide A_3 225-228, -21, ^1H, ^{13}C, 2D, ESIFTMS	Aglycone (**186**) (OMe-3')Quin-^{3}(SO_3Na-6')Glc-^{4}Quin-^{2}(SO_3Na-4')Xyl(OH-3β)	[20]
	Liouvilloide B_1 239-241, -51, ^1H, ^{13}C, 2D, ESIFTMS	Aglycone (**185**) (SO_3Na-6') (OMe-3')Glc-^{3}(SO_3Na-6')Glc-^{4}Quin-^{2}(SO_3Na-4')Xyl(OH-3β)	[20]
	Liouvilloide B_2 240-243, -18, ^1H, ^{13}C, 2D, ESIMS	Aglycone (**186**) (SO_3Na-6') (OMe-3')Glc-^{3}(SO_3Na-6')Glc-^{4}Quin-^{2}(SO_3Na-4')Xyl(OH-3β)	[20]
Sutherlandia frutescns	Sutherlandioside A 210-220, +17.8,	Aglycone (**200**) Glc(OH-25)	[168]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
(Fabaceae)	IR, ^{1}H, ^{13}C, 2D, ESIMS		
	Sutherlandioside B 158, -26.8, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**214**) Glc(OH-25)	[168]
	Sutherlandioside C +15.0, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**215**) Glc(OH-25)	[168]
	Sutherlandioside D +58.0, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**216**) Glc(OH-25)	[168]
Synapta maculate (Holothurioidea)	Synaptoside A 285-287, -16, ^{1}H, ^{13}C, 2D, MALDITOFMS	Aglycone (**188**) $(SO_3Na$-4')Glc-^{4}Xyl(OH-3β) |^{2} $(SO_3Na$-6') (OMe-3')GlcA-^{3}Glc-^{4}Quin	[169]
	Synaptoside A_1 268-270, -3, ^{1}H, ^{13}C, 2D, MALDITOFMS	Aglycone (**179**) $(SO_3Na$-4')Glc-^{4}Xyl(OH-3β) |^{2} $(SO_3Na$-6') (OMe-3')GlcA-^{3}Glc-^{4}Quin	[169]
Terminalia ivorensis (Combretaceae)	Ivorenoside A -10.1, ^{1}H, ^{13}C, 2D	(**221**)	[170]
	Ivorenoside B -0.7, ^{1}H, ^{13}C, 2D	(**222**)	[170]
	Ivorenoside C +13.3, ^{1}H, ^{13}C, 2D	Aglycone (**63**) Glc(CO_2H-28)	[170]
T.superba	Triterpenoid saponin 1 -13.2, IR, ^{1}H, ^{13}C, 2D, ESIMS	Maslininc acid (**21**) Glc(CO_2H-28)	[171]
	Triterpenoid saponin 2 +4.2, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**31**) Glc(CO_2H-28)	[171]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_{D,}$ spectra recorded (2)	Structure (3)	Ref. (4)
T.tropophylla	Triterpenoid saponin 3 -18.1, IR, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**61**) Glc(CO_2H-28)	[171]
	Triterpenoid saponin 4 Terminaliaside A 6.1, ^{1}H, ^{13}C 2D, FABMS	Aglycone (**49**) Glc(CO_2H-28) 16-oxo-saniculagenin C (**5**) (angeloyloxy-3')Glc(OH-3β) Glc-^{2}Glc(CO_2H-28)	[171] [172]
Verbesina virginica (Asteraceae)	Verbesinoside A +36.2,UV, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**111**) Xyl-^{4}Xyl-^{2}Glc(OH-3β)	[173]
	Verbesinoside B +43.3, UV, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**111**) Xyl-^{4}Glc(OH-3β)	[173]
	Verbesinoside C +22.5, UV, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**108**) Xyl-^{4}Xyl-^{2}Glc(OH-3β)	[173]
	Verbesinoside D +27.7, UV, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**109**) Xyl-^{4}Xyl-^{2}Glc(OH-3β)	[173]
	Verbesinoside E +31.9, UV, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**110**) Xyl-^{4}Xyl-^{2}Glc(OH-3β)	[173]
	Verbesinoside F +24.2, UV, ^{1}H, ^{13}C, 2D, ESIMS	Aglycone (**52**) Xyl-^{4}Xyl-^{2}Glc(OH-3β)	[173]
Xanthoceras sorbifolia (Sapindaceae)	Sorbifoliaside A ^{1}H, ^{13}C, 2D, ESIMS	Saniculagenin C (**4**) Glc-^{6}Glc(OH-3β) Glc-^{6}Glc(OH-28β)	[174]

Table 7: Continued

Source (1)	Saponin mp, $[\alpha]_D$, spectra recorded (2)	Structure (3)	Ref. (4)
	^1H, ^{13}C, 2D, ESIMS Sorbifoliaside B	Glc-^{2} 16-oxo-saniculagenin C (**5**) Glc-^{6}Glc(OH-3β) Glc-^{6}Glc(OH-28β) Glc-^{2}	[174]
	Sorbifoliaside C ^1H, ^{13}C, 2D, ESIMS	16-oxo-Saniculagenin C (**5**) Glc-^{6}Glc(OH-3β) Glc-^{2} Glc-^{6}Glc(OH-28β)	[174]
	Sorbifoliaside D ^1H, ^{13}C, 2D, ESIMS	Saniculagenin C (**4**) Glc-^{6}(angeloyloxy-3')Glc(OH-3β) Glc-^{6}Glc(OH-28β)	[174]
	Sorbifoliaside E ^1H, ^{13}C, 2D, ESIMS	16-oxo saniculagenin C (**5**) Glc-^{6}(angeloyloxy-3')Glc(OH-3β) Glc-^{6}Glc(OH-28β)	[174]
	Sorbifoliaside F ^1H, ^{13}C, 2D, ESIMS	Saniculagenin C (**4**) Glc-^{6}(angeloyloxy-3')(OAc-4')Glc(OH-3β) Glc-^{6}Glc(OH-28β) Glc-^{2}	[174]
	Bunkankasaponin F ^1H, ^{13}C, 2D,ESIMS	Aglycone (**65**) Glc-^{2}GlcA(OH-3β) (diangeloyloxy-3',4')Fuc(OH-21β)	[174]
Zygophyllum coccineum (Zygophyllacea)	Zygophylloside S +0.050, ^1H, ^{13}C, ESIMS	Quinovic acid (**145**) Ara-^{2}Glc(OH-3β)	[175]
Z.fabago	Zygophylloside O +221-223, +23.7, ^1H, ^{13}C, ESIMS	Quinovic acid (**145**) (2'-SO_3H)Xyl(OH-3β)	[176]
	Zygophylloside P +202-204, +20.0, ^1H, ^{13}C, ESIMS	Quinovic acid (**145**) (2'-SO_3H)Xyl(OH-3β) Glc(CO_2H-28)	[176]

Abbreviations: Glc=β-D-glucopyranosyl; GlcA=β-D-glucuronic acid pyranosyl; Gal=β-D-galactopyranosyl; Ara=α-L-arabinopyranosyl; Ara(f)=α-L-arabinopyranosyl; Xyl=β-D-xylopyranosyl; Rha=α-L-rhamnopyranosyl, Apio(f)= β-D-apiofuranosyl; Fuc= β-D-fucopyranosyl; Quin= β-D-quinovopyranosyl;