Table 8. – Sesquiterpenes a/ (continued)

	NSC	Active	Inactive
Fastigilin B 12/	176503	PS (137)	Bl, LE, LL(new), KB
Fastigilin C 12/	176507	PS (137)	KB
Gaillardin 11/	106394	KB	LE
Helenalin 12,17/	85236	PS (220), KB	Bl, LE, LL, LL(new), SA, WA
Helenalin acetate 17/	166124	PS (165)	
Isogaillardin 11/	106395	KB	
Liatrin 11/	135034	PS (163)	
Lipiferolide 5/	251676	KB	
Nardol diastereomer (?) b,13/	127084	WA	
Ovatifolin acetate 16/	--	PS (143), KB	
Parthenolide 2/	157035	KB	PS, LE
Paucin c,2/	136722	PS (138)	Bl, LE
Tulipinolide 5/	106405	KB	LE, WA
Vernodalin 11/	124459	WA, KB	
Vernolepin 11/	106398	WA, PS (145), KB	
Vernolide 11/	124460	KB	WA, LE, PS
Vernomenin 11/	116070	PS (136)	KB
Vernomygdin 11/	135072	KB	
Zaluzanin C 2/	177851	PS in vitro	PS
from Acanthospermum 6/	--	PS (147), KB	
" Centaurea 2/	--	PS (150), KB	

a/ All lactones except the one noted.

b/ Not a lactone.

c/ A glycoside.

these compounds because of their KB cell activity. The remaining triterpenes (table 11) which have been isolated are generally not cytotoxic but show activity in Walker 256. Negative or marginal in vivo antitumor activity against the P388 and L1210 leukemias, and against the slow-growing tumors, has made this group of little interest for our program.

Lignans

These are a group of rather uncommon plant constituents which are found in some plants with activity against KB cells. The chemical skeletons of the group are shown in figure 3. The bisbenzocyclooctadiene skeleton on the right is a type recently added to the classic lignan family. Although podophyllotoxin (fig 3) never passed our criteria for pharmacologic and clinical study, several semisynthetic relatives have been in clinical trial here and elsewhere in the world (13). Two of them, VM-26 and VP-16-213, have produced responses in brain tumors, lymphosarcomas, and (in Europe) Hodgkin's

Table 9. – Diterpenes

	NSC	Active	Inactive
Gnidicin 11/	238941	PS (173)	
Gnididin 11/	238942	PS (127)	
Gniditrin 11/	238943	PS (168)	
12-Hydroxydaphnetoxin 11/	239073	PS (131)	
Jatrophone 11/	135037	PS (145), KB	Bl, LE, LL, LL(new)
Nozeredn 11/	239072	PS (200)	Bl, LL(new)
Podolide 11/	238978	KB	PS
Taxodione (also under Quinones) 11/	122419	WA, KB	LE, PS
Taxodone " " " 11/	122420	KB	
Tripdiolide 11/	163063	LE, PS (158), KB	Bl, LL(new)
Triptolide 11/	163062	LE, LL(new), PS (131), KB	Bl
Triptonide 11/	165677	KB	LE
from Jatropha	--	PS (141)	

Table 10. – Cucurbitacins

	NSC	Active	Inactive
Cucurbitacin B 2,4,5,11/	49451	PS (135), KB	Bl, CA, LE, LL, SA, WA
" D 5,11,16/	521776	PS (131), KB	LE, WA
" E 11,17/	106399, 521775	LL, KB	Bl, LE, PS, SA, WA
" F 11/	--	WA, KB	LE, PS
" I 11/	521777	KB	LE, PS, WA
" L 2/	112167	PS in vitro, KB	PS, WA
" P 11/	135074	KB	
" Q 11/	135075	KB	
a Cucurbitacin glycoside 11/	--	KB	
" " " 11/	--	KB	
" " " 11/	--	KB	
" " " 11/	--	KB	
Datiscacin (Cucurbitacin R) 11/	144154	KB	
Datiscoside (Cucurbitacin D dehydroepirhamnoside) 11/	144153	LL, PS (150), WA, KB	Bl, LE, LL(new)
Dihydrocucurbitacin B 5,11/	106401	KB	WA
Isocucurbitacin B 11/ (2-Epicucurbitacin B)	106400	KB	

disease. These compounds differ from podophyllotoxin in that they are demethylated at the 4′ position, are epimerized at the 1 position, have a glucoside on the 1-hydroxyl group, and are acetals by reaction with aldehydes. The original 4′-demethylpodophyllotoxin came from *Podophyllum hexandrum* Royle [*P. emodi* Wall. ex Royle]. Table 12 lists the active lignans isolated during fractionation.

Table 22. - Cumulative index of compounds listed in these tables and their plants of origin (see table 23) (continued)

Compound entry no.	Name	NSC No.	Table No.	Plant entry no. (table 23)
C85	" " Mirabilis	--	18	P159
C86	" " Muscari	--	18	P161
C87	" " Osteomeles	--	18	P167
C88	" " Rubia	--	11	P187
C89	" " Saponaria	77472	14	P188
C90	Compound from Solanum	--	14	P193
C91	" " Trillium	--	14	P216
C92	Compound B from Tylophora	85707	20	P218, P220
C93	" C " "	85708	20	P218, P220
C94	" D " "	85709	20	P218, P220
C95	" E " "	92070	20	P218
C96	" D " Tylophora indica	100056	20	P221
C97	" E " " "	100057	20	P221
C98	Conessine hydrochloride	32989	20	P124
C99	Coptisine chloride	119754	20	P69
C100	Coroglaucigenin	144150	15	P138
C101	Costunolide	106404	8	P142, P201
C102	Crinamine	88421	20	P79
C103	Crotepoxide	106396	21	P82
C104	Cryptopleurine	19912	20	P42
C105	Cryptowoline iodide	86342	20	P83
C106	Cucurbitacin D	49451	10	P39, P85, P89, P146, P153
C107	" D	521776	10	P39, P78, P84
C108	" D dehydroepirhamnoside	See Datiscocide	10	
C109	" E	106399	10	P71, P153
		521775		
C110	" F	--	10	P89
C111	" I	521777	10	P172
C112	" L	112167	10	P95
C113	" P	135074	10	P43
C114	" Q	135075	10	P43
C115	" glycoside	--	10	P89
C116	" "	--	10	P89
C117	" "	--	10	P89
C118	Cucurbitacin glycoside	--	10	P89
C119	Cycleadrine	--	20	P87
C120	Cycleanorine	--	20	P87
C121	Cycleapeltine	--	20	P87
C122	Cycloprocobuxine	102244	20	P51
C123	Cymarin	7522	15	P25, P168
C124	Damsin	85249	8	P110
C125	Datiscacin (Cucurbitacin R)	144154	10	P89
C126	Datiscoside (Cucurbitacin D dehydroepirhamnoside)	144153	10	P89
C127	Daucosterol (β-sitosterol glucoside)	165962	5	P177