

## Supplementary Materials

Table S1. Chemical composition of Mexican propolis

Region	Botanical Source	Color	Compounds	Analytical method	Cite
South	<i>Dalbergia species</i>	Red propolis	(-)-7-hydroxyflavanone, (p)-pinocembrin, (-)-mucronulatol, (-)-arizonicanol A, (p)-vestitol, (-)-melilotocarpan A and (-)-melilotocarpan D	RP-HPLC	[52]
	<i>Bursera simaruba</i>		$\alpha$ -amyrenone, $\alpha$ -amyrin acetate III, $\alpha$ -amyrin IV, $\beta$ -amyrenone II, $\beta$ amyrin V, Fucosterol VI, $\beta/\gamma$ -sitosterol VII/VIII	HPLC GC-MS	[53]
	<i>Bursera simaruba</i> (L.) Sarg, <i>Dalbergia glabra</i> , <i>Cordia alliodora</i> , <i>Cardiospermum haliacacabum</i> , <i>Dombeya wallichii</i> , <i>Antigonum leptopus</i> , <i>Sapindus saponaria</i> *1		Epoxy-pinocembrin chalcone, $\epsilon$ -caprolactone derivative, Pinostrobin, Pinocembrin, Izalpinin, Kaempferol, Rhamnetin, Dymethylallyl caffeate, Isopent-3-enyl caffeate, Cinnamic acid, 3,4 Dimethoxycinnamic acid, Caffeic acid	EIMS HPLC	[54]
	<i>Bursera simaruba</i>	N/E	Triterpenoids mangiferolic acid, iso-mangiferolic acid, and dammarenediol II	GC-MS	[74]

Center	N/E	Brown/ green yellow	Pinocembrin, Tectocrisine, Borneol, Cardamonin, Sakuranetina, Taraxasterol, Vaccenic acid, Ethyl palmitate, 1-(3-aminopropyl) azaciclotridecan-2-ona	CG-EM	[86]
			Esclareno, Cardamonin, Pinocembrin, Aromadendrene, Ethyl ester of oleic acid, Eicosano		
			Geranilgeraniol, Lupeol, Lupenone, $\alpha$ -Amirin, Vaccenic acid, Oleic acid		
			12-Oleaneno, Cicloartenol, 4,8 a-Dimetil-6-(1-metiletenil) 3,5,6,7,8,8ahexahidro-2(1H)-naftalenona, Escualeno		
			Selinene, Lauric acid, Palmitic acid, Aromadendrene		
	N/E	Brown	Pinocembrin, chrysin, galangin, alpinetin, 5-methyl-pinobanksin ether, dillenetin, isorhamnetin, 5-methylgalangin ether, 5-methylchrysin ether, ferulic acid, syringic acid, and caffeic acid	HS-SPME), GC-MS	[82]
North	N/E	N/E	Naringin, Naringenin, Kaempferol, Quercetin, Acacetin, Luteolin, Pinocembrin Chrysin	HPLC-DAD HPLC-MS	[40]
		Brown	Alpinone, pinostrobin, galangin-5-methylethe, and kaempferide		[187]

			Pinocembrin, pinobanksin, and chrysin	Vacuum liquid chromatography (VLC)	
			Pinocembrin, isorhamnetin, pinobanksin-5-methylether, alpinetin.		
<i>Encelia farinosa</i>			Pinocembrin, Xantomicrol, Chrysin, Galangine	HPLC	[188]
	N/E		(2R,3R)-3,5-dihydroxy-7-methoxyflavanone, 3-(2-methyl)butyrate, (7''R)-8-[1-(4'-hydroxy-3'-methoxyphenyl)prop-2-en-1-yl]galangin	MPLC	[138]
<i>Encelia farinosa</i> , <i>Ambrosia deltoidea</i> , <i>Ambrosia ambrosioides</i> , <i>Bursera laxiflora</i> , <i>Populus fremontii</i> S.Watson*	N/E		8-[1-(4-hydroxy-3-methoxyphenyl)prop-2-en-1-yl] galangin, 8-[1-(4-hydroxy-3-methoxyphenyl) prop-2-en-1-yl] chrysin, (2R,3R)-6-[1-(4_-hydroxy-3-methoxyphenyl) prop-2-en-1-yl] pinobanksin, (2R,3R)-6-[1-(4_-hydroxy-3-methoxyphenyl) prop-2-en-1-yl] pinobanksin 3-acetate	FAB-MS HR-FAB-MS RP-MPLC HPLC	[41]
	Brown-green-Ochre		Pinocembrin, Pinobanksin 3-acetate, CAPE, Chrysin, Galangin, Acacetin	HPLC	[55]
	N/E		Chrysin, Caffeic acid phenethyl ester, Pinocembrin, Hesperetin, Naringenin, Rutin	HPLC-DAD	[140]
<i>Mesquite (Prosopis) and catclaw (Acacia greggii)</i>	N/E		Gallic acid, cinnamic acid, <i>p</i> -coumaric acid, naringenin, quercetin, luteolin, kaempferol, apigenin, pinocembrin,	HPLC-DAD	[81]

			pinobanksin 3-acetate, CAPE, chrysin, galangin, acacetin, and pinostrobin		
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Table S2. Chemical composition of Brazilian propolis

Region	Botanical Source	Type	Compounds/ Chemical Markers	Analytical method	Cite
NE	<i>Dalbergia ecastophylulun</i>	Red propolis	3-Hydroxy-8-9-dimethoxypterocarpan Formononetin	HPLC	[48]
			Caffeic acid, Ferulic acid, Umbelic acid, p-coumaric acid, 7-O-beta-glucopyranosyl-4'-hydroxy-5-methoxyisoflavone, 6-Methoxyluteolin 7-rhamnoside, Genistein, Kaempferol, Cathechin, Dalbergioidin, Epicatechin, Daidzein, Liquiritigenin, 2'-Hydroxyformononetin, Evernic acid, Narigenin, Pinobanksin, Calycosin, Quercetin, Retusapurpurin A and B, Isoliquiritigenin, Formononetin / Isoformononetin, 4,4'-dihydroxy-2-methoxychalcon, (7S)-dalbergiphenol, Vestitol, Pinostrobin, Medicarpin, 2',6'-dihydroxy-4'-methoxydihydrochalcone,	LC-DAD-UV and LC-ESI-Orbitrap-FTMS	[37]

			Thevetiaflavone, Biochanin A, Chrysin, Pinocembrin, 3',4'-di-O-benzyl-7-O-(2-hydroxyethyl)-3-Omethylquercetin, (3S)-7-O-methylvestitol, 7,3'-Dihydroxy-4'-methoxy-8-methylflavane, Cycloartenol / $\alpha$ -amyrin / $\beta$ -amyrin, Hyperibone H, 16-hydroxiguttiferone K, Rhuschalcone V, Guttiferone F, Xanthochymol, Guttiferone E, Anacardic acid (6-pentadecylsalicylic acid), Makassaric acid, Guttiferone B,C and D, 19-nor-10-keto-25-hydroxyvitamin D3.		
			Trans feluric acid	HPLC	[35]
<i>Baccharis dracunculifolia</i>	Green Propolis		Artepin C (3,5-diprenyl-4-hydroxycinnamic acid)	HPLC	[42]
			Chatequin, Trans feluric acid, lutenoin	HPLC	[35]
poplar tree, <i>B. dracunculifolia</i>	Brown Propolis		pinobanksin, pinocembrin, pinobanksin 3-acetate, chrysin, and galangin	HPLC	[44]
<i>Copaifera sp.</i>			Chatequin, Trans feluric acid, lutenoin	HPLC	[35]