

Additional file 1. Popular uses of botanical materials for dermatological conditions and topical (external) applications

<i>Botanical taxon (voucher specimen code)</i>	<i>Botanical family</i>	<i>Vernacular name in Vulture-Alto Bradano</i>	<i>English name</i>	<i>Status</i>	<i>Part(s) used</i>	<i>Preparation and application</i>	<i>Popular use</i>	<i>Consensus index</i> ♦ <10% ♦♦ 10-20% ♦♦♦ 21-30% ♦♦♦♦ 31-40% ♦♦♦♦♦ >40%	<i>Records of similar use in other Italian ethnobotanical studies conducted in mainland southern Italy</i>
<i>Aesculus hippocastanum</i> L.	Sapindaceae	<i>castagna bastarda</i>	horse chestnut	W	fruit	Fresh fruits are split in half and seeped in alcohol for 40 days and then used to massage swollen or sore legs.	Analgesic; anti-oedemic	♦	None
					bark and leaves	A decoction is made of the bark and leaves then mixed with olive oil or pig fat to make an ointment. It is applied topically.	Anti- haemorrhoid	♦	None
<i>Allium cepa</i> L. (CQ-206)	Alliaceae	<i>cipudda</i>	onion	C	bulb	Slice of bulb is warmed, and then a drop of olive oil and sugar is added. This is then topically applied.	Anti-furuncle; anti-abscess	♦	[1, 2]
					bulb	Slice of fresh bulb is rubbed on burned skin.	Vulnerary (for burn wounds)	♦	None
					bulb membrane	Applied topically (like a Band-Aid) to small lacerations.	Haemostatic	♦♦	[3]
					leaves	Fresh leaves are used to tie strips of bark from <i>Ulmus</i>	Splint for broken or	♦	None

						<i>minor</i> L. around the affected limb.	severely bruised bones		
<i>Allium sativum</i> L.	Alliaceae	<i>aglǰē</i>	garlic	C	bulb	Piece of bulb is crushed and rubbed onto nipple of breast-feeding mother.	Wean baby from breast milk	◆	None
						Bulb is boiled, and then while still hot, it is rubbed onto a callus.	Anti-callus; analgesic (for callus)	◆	[4, 5]
						Pieces of fresh bulb (small cloves) are kept in mouth to suck on.	Against sore throat	◆	None
						Fresh pieces of bulb are chewed.	Against toothache; anti-gingivitis	◆	[5, 6]
						Fresh bulb is rubbed onto the skin where stung by an insect.	Anti-sting/anti-itch (for insect bite)	◆◆	[1, 2, 4, 7]
<i>Arum italicum</i> Mill. (CQ-175)	Araceae	<i>frugnē n cuttē</i>	Italian lords and ladies	W	leaves	Fresh leaf applied topically. It will "stick" to the skin.	Analgesic (for insect stings and burns); vulnerary (for burn wounds)	◆◆	None
<i>Arundo donax</i> L. (CQ-146)	Poaceae	<i>cannē</i>	giant reed	W	white hemi-cellulose membrane at node	Topically applied to lacerations.	Haemostatic	◆◆◆◆	[1-3, 5]
						Topically applied to mouth sores on lips (but	Anti-herpes (of the	◆	None

						not inside the mouth or on tongue).	mouth)		
					stem	Stem is cut so that it will fit onto the fingers. These <i>canned</i> are worn to protect the fingers during the grain harvest.	Physical protection of fingers	◆◆	None
						Green stem is cut into 9 tooth-size pieces which are used in the ritual healing of toothache.	Against toothache	◆	None
<i>Ballota nigra</i> L. (CQ-160)	Lamiaceae	<i>erba cane</i>	black horehound	W	aerial parts	Decoction is used as a skin wash.	Anti-inflammatory Haemostatic	◆ ◆	None [2]
<i>Brassica oleracea</i> L.	Brassicaceae	<i>cavolo</i>	cabbage	C	leaf	Heated and topically applied for pain relief.	Anti-rheumatic; anti-arthritis; analgesic	◆	[5, 7]
						Fresh leaf is wrapped around injured area of limb, and then held in place with a bandage. Frequently used on horse legs.	♣ Analgesic and anti-inflammatory for tendonitis	◆	None
						Fresh leaf applied to engorged breast of lactating woman.	anti-lactic; anti-mastitis	◆	[2]
<i>Cannabis sativa</i> L.	Cannabaceae	<i>canapē</i>	hemp	W	fibers	Hemp fibers (<i>stoppē</i>) are coated in well-beaten egg white and used to make a hard cast (<i>stoppata</i>) for setting bones.	Cast for broken or severely bruised bones	◆	None

<i>Capsicum annuum</i> L.	Solanaceae	<i>pepperoni picantē</i>	sweet pepper	C	fruit	Dried and rubbed onto nipple of breast-feeding mother.	Wean baby from breast milk	◆	None
<i>Cyclamen hederifolium</i> L. (CQ-186)	Myrsinaceae	<i>ciclamino</i>	hardy cyclamen	W	tuber	Black skin of fresh tuber is removed, and then the rest of tuber is grated to make a poultice for topical applications.	Anti-wart	◆	None
<i>Ecballium elaterium</i> (L.) A. Richard (CQ-169)	Cucurbitaceae	<i>u cuppē ti ridzē</i>	squirting cucumber	W	leaf	Heated and topically applied.	Anti-abscess	◆	None
						Fresh leaf is wrapped around painful limb.	Anti- rheumatic; anti- inflammatory ; analgesic	◆	None
<i>Ficus carica</i> L. (CQ-173)	Moraceae	<i>fēchē</i>	fig	C	latex from immature fruit	Topically applied.	Anti-callus; anti-corn (feet)	◆	[7]
							Anti-wart	◆◆	[1, 2, 5-8]
							Anti-itch (for itchy dermatitis); anti- inflammatory	◆	None
							Anti- sting/anti-itch (for insect bites)	◆	[2, 4, 7]
Topically applied to							Anti-herpes	◆	None

						mouth sores on lips (but not inside the mouth or on tongue).	(of the mouth)		
					leaf	Fresh leaf is placed on breast as compress.	Anti-mastitis	◆	None
<i>Foeniculum vulgare</i> ssp. <i>vulgare</i> Mill. (CQ-196)	Apiaceae	<i>fēnocchē</i>	fennel	W	seeds	Seeds are chewed by another person and the resulting aromatic breath is blown into the inflamed or red eyes of the patient.	Anti-conjunctivitis	◆	None
<i>Hordeum vulgare</i> L.	Poaceae	<i>orzo</i>	barley	C	fruits (grains)	Boiled and placed in cloth to be used as warm compress that is applied to the throat.	Against sore throat	◆	None
<i>Hypericum perforatum</i> L. (CQ-183)	Hypericaceae	<i>erva pē rē cuttē; iperico</i>	St. John's Wort	W	aerial parts	Fresh aerial parts are used to make an oleolite (heated in olive oil). When the oil has cooled, it is used to massage injured or swollen horse legs.	♣ Anti-inflammatory; emollient; vulnerary	◆	[4]
<i>Juglans regia</i> L. (CQ-181)	Juglandaceae	<i>noce</i>	walnut	SC	bark	Decoction used as mouth wash or gargle.	Against toothache	◆	None
					flowers	Topically applied as ritual object in spiritual healing of <i>mal d'arco</i> (rainbow illness).	Against "Rainbow illness"	◆	None
					leaves	Fresh leaves topically applied to areas of swelling from varicose veins. This is done at	Heals varicose veins; reduces swelling of	◆	[6]

						night and the leaves are held in place with a bandage.	legs		
<i>Malva sylvestris</i> L. (CQ-156)	Malvaceae	<i>malvĕ</i>	common mallow	W	aerial parts (or just stems)	Decoction – once cooled, it is used as a wash for infants. Some also make the decoction together with the dried aerial parts of <i>Matricaria recutita</i> .	Anti-dermatitis (babies); Against heat- and diaper-rash in babies	◆	None
						Decoction is used as a mouth wash.	Against toothache (dental abscess)	◆	[4, 7, 9]
					leaves	Fresh leaf applied topically; changed 2-3 times a day.	Anti-bruise	◆	None
						Fresh leaf is heated over a fire and applied topically as compress; compress is changed 2-3 times a day.	Anti-furuncle; anti-abscess	◆◆	[5, 8]
						Fresh leaves are boiled and placed into cloth sack to use as a warm compress; compress is changed 2-3 times a day.	Anti-mastitis	◆◆	[5]
						Leaves are boiled and placed into a cloth sack to use as a compress that is held on the jaw or cheek.	Against toothache (dental abscess)	◆	None
						Leaves are boiled and packed into the space where rotten teeth have	Against toothache (dental	◆	None

						fallen out or areas of acute pain from toothache.	abscess)		
<i>Marrubium vulgare</i> L. (CQ-170)	Lamiaceae	<i>marruggē</i>	white horehound	W	aerial parts	Decoction is made and used as a wash for the affected area. The decoction is left on the skin to air dry. This is repeated 2-3 times a day until healed.	♣ Anti-furuncle; anti-abscess; anti-cyst (used on humans and livestock)	◆◆◆	[2, 9]
							Anti-dermatitis	◆	[5]
							Anti-fungal (for foot fungus)	◆	None
							Anti-haemorrhoid	◆	[9]
							Anti-wart	◆	None
							Panacea	◆◆◆◆	[1, 3, 5, 9]
<i>Matricaria recutita</i> L. (CQ-118)	Asteraceae	<i>camomilla</i>	German chamomile	W	stems	Dried, then made into decoction that is used as an eye wash. Eyes are washed 3 times a day until healed. A cloth compress soaked in this decoction water can also be applied to the eyes.	Anti-conjunctivitis; anti-inflammatory (of eye)	◆◆◆	[1, 2, 8]
					aerial parts (or just stems)	Dried, then made into decoction that is used as a facial wash.	Face cleansing; anti-acne	◆	[10]

					Dried, then made into decoction that is used to wash or bathe babies with heat- or diaper-rash. Some also make the decoction together with the dried aerial parts of <i>Malva sylvestris</i> L.	Anti-dermatitis; anti-rash; anti-inflammatory	◆	None	
					Dried, then made into decoction for washing hair.	Wash for oily hair	◆	None	
						Hair lightener	◆	None	
<i>Olea europaea</i> L. (CQ-197)	Oleaceae	<i>aulivē</i>	olive	C	leaves	Decoction with rosemary leaves (<i>Rosmarinus officinalis</i> L.) is used as a foot bath.	Relieve foot swelling	◆	None
					oil	Topically applied to burn wound. This must be done in secret immediately after burn injury occurs.	Vulnerary and emollient (for burn wounds)	◆◆	[5-7]
						Rubbed onto the skin several times a day to treat the folk illness <i>Fuoco di Sant'Antonio</i> (St. Anthony's Fire), or shingles.	Anti-shingles; anti-inflammatory	◆	None
						Rubbed onto the skin of babies with diaper- or heat -rash.	Anti-dermatitis; anti-inflammatory	◆	None
						Rubbed onto the crown of	Against	◆	None

						baby's head, then hair is brushed with soft brush or comb.	cradle-cap (in infants)		
						Warm oil is applied to animal hooves.	♣ Vulnerary for cracked hooves or chapped skin near hooves	♦	None
						Topical application to diaper area on infants.	Against diaper rash	♦	None
						Topical applications to dry skin.	Emollient	♦♦	[6]
						Rubbed into the hair and scalp in ritual treatment for scabies and lice.	Anti-scabies; anti-lice	♦	[8]
<i>Origanum heracleoticum</i> L. (CQ-207)	Lamiaceae	<i>rigano</i>	oregano	W	leaves	Dried leaves are mixed with olive oil and made into a compress that is applied to jaw.	Against toothache	♦	[1]
<i>Oryza sativa</i> L.	Poaceae	<i>riso</i>	rice	C	grains	Rice grains (store bought) are boiled until over-cooked, then applied topically.	Suppurative; anti-furuncle; anti-abscess	♦	None
<i>Parietaria diffusa</i> Mert. & Koch (CQ-212)	Urticaceae	<i>erba vjntě</i>	pellitory of the wall	W	aerial parts	A decoction of aerial parts is used as a mouth wash.	Against toothache; anti-gingivitis	♦	None
<i>Plantago major</i> L. (CQ-225)	Plantaginaceae	<i>cintu nirvi</i>	common plantain	W	leaves	Fresh leaves are crushed with a stone then applied topically.	Anti-rheumatic; anti-arthritic; analgesic; anti-	♦♦	None

							inflammatory		
							anti-abscess; anti-boil; suppurative	◆◆◆◆	[1, 4, 8, 9]
							Vulnerary (for burns)	◆◆◆	None
<i>Rosmarinus officinalis</i> L. (CQ-113)	Lamiaceae	<i>rosamarēnē</i>	rosemary	C, W	leaves	Decoction with olive leaves (<i>Olea europaea</i> L.) is used as a foot bath.	Relieve foot swelling	◆	None
<i>Rubus ulmifolius</i> Schott (CQ-164)	Rosaceae	<i>mora</i>	elmleaf blackberry	W	leaves	A layer of aged pig fat (<i>Ja sugnē fracidē</i>) is placed on affected area of skin, and then fresh leaves are placed on top of the fat. This is wrapped with a bandage to hold the leaf and fat in place. (Some also cite the application of the leaf directly to furuncle and abscess without using pig fat.)	Anti-furuncle; vulnerary (for lacerations); anti-abscess; anti-carbuncle; suppurative	◆◆	[4, 7]
						Fresh leaves are applied topically to skin to treat dog bite. The leaves are held in place with a bandage.	Vulnerary and anti-infective (for dog-bite)	◆	None
					root	A decoction of the fresh root is made for use as a hair wash.	Prevent/stop hair loss	◆	None
<i>Rumex crispus</i> L. (CQ-171)	Polygonaceae	<i>patsa</i>	curled dock	W	leaves	Leaves are warmed over a fire; the cortex is removed and placed in olive oil.	Vulnerary (for burn wounds)	◆	None

						This is topically applied to burn wounds.			
<i>Ruta graveolens</i> L.	Rutaceae	<i>ruta</i>	rue	W	aerial parts	Dried then made into a decoction that is used as an external wash for humans and animals.	♣ anti-furuncle; anti-abscess; anti-acne	♦	None
						Decoction of aerial parts is drunk or used as an external wash.	Panacea	♦	None
<i>Sambucus ebulus</i> L. (CQ-180)	Adoxaceae	<i>Iervolē</i>	dwarf elder	W	flowers	When flowers turn black, they are placed in shoes and walked in (without socks) for 3 days.	Prevents formation of blisters and foot sores	♦	None
					fruit	Juice from mature fruits is applied to open wounds in animals to detract flies and other insects from the wound.	♣ Fly and insect repellent for open wounds	♦	[11]
					leaves	Fresh leaf is wrapped around foot before putting on shoes.	Prevents formation of blisters; sweat absorbent; "toughens" foot skin	♦	[2]
<i>Sambucus nigra</i> L. (CQ-151)	Adoxaceae	<i>savēuchē</i>	elder	W	flowers	Dried then made into infusion for use as a foot bath.	Vulnerable for foot sores; emollient for dry, cracked feet	♦	[8, 10]
					leaves	Fresh leaves topically applied.	Anti-rheumatic;	♦	[3, 6]

							analgesic; Anti-inflammatory		
							Anti-sting/anti-itch (for insect bites)	◆	[1, 5]
							Haemostatic (for lacerations)	◆	None
							Anti-boil; anti-abscess; suppurative	◆	[7]
<i>Solanum lycopersicum</i> L.	Solanaceae	<i>pomodoro</i>	tomato	C	fruit	Fruit pulp is rubbed onto the skin.	Heals insect stings (from wasps and bees)	◆	None
							Anti-callus	◆	None
<i>Solanum tuberosum</i> L.	Solanaceae	<i>potata</i>	potato	C	tuber	Fresh slice of tuber is topically applied.	Vulnerary (for burn wounds)	◆◆	[3, 5, 7, 10]
						Fresh slice of tuber is topically applied.	Anti-bruise	◆	None
						Fresh slice of tuber is grated and applied to eyes.	Anti-inflammatory (for eyes); eye moisturizer	◆	[3, 5, 12]
						Fresh skin of tuber is peeled off and applied as a compress on the jaw or	Analgesic (against tooth-ache)	◆	None

						cheek over area of toothache pain.			
						Fresh slice of tuber is placed on the forehead until headache is relieved.	Anti-headache	◆	[5]
<i>Tussilago farfara</i> L. (CQ-202)	Asteraceae	<i>stampē kavalēl</i>	coltsfoot	W	leaves	Fresh leaf topically applied to affected area.	Anti-furuncle; suppurative	◆	[3, 7]
							Vulnerary (for burn wounds)	◆	None
						Fresh leaves applied as ritual objects in healing ceremony for <i>pesta cane</i> (dog paw print illness) in which the leaves are laid in a cross over the lower back of infants that won't grow.	Against <i>pesta cane</i> (dog paw print illness)	◆	None
<i>Ulmus minor</i> L. (CQ-195)	Ulmaceae	<i>olmo</i>	elm	W	bark	Strips of bark are used to make a splint and the bark is tied around the affected limb with the leaves of <i>Allium cepa</i> L.	Splint for broken or severely bruised bones	◆	None
<i>Umbilicus rupestris</i> (Salisb.) Dandy (CQ-157)	Crassulaceae	<i>favē alla mersē; grassossē; cuppētieddē; grassognē</i>	navelwort	W	leaves	Fresh leaf is topically applied to affected area. Most cite the extraction, or "peeling off" of the leaf "skin" (epithelium) before using.	Anti-corn (feet); anti-callus (feet)	◆◆	[7]
							Heal ingrown toenails	◆◆	None

							Anti-furuncle; anti-abscess; suppurative	◆	[1-3, 13]
							Relieves foot swelling; anti- inflammatory	◆	[2]
							Vulnerary (also for lacerations)	◆	None
						Fresh leaf is heated and applied to jaw or cheek.	Against toothache	◆	None
<i>Urtica dioica</i> L. (CQ-179)	Urticaceae	<i>ardiga</i>	common nettle	W	leaves	Fresh leaves are topically applied.	Anti- rheumatic; anti-arthritis	◆	[4, 9, 10]
						Decoction used as hair wash.	Wash for oily hair; strengthens weak hair	◆	[8, 10]
<i>Verbascum sinuatum</i> L. (CQ-218)	Scrophularia- ceae	<i>varvaschē</i>	wavyleaf mullein	W	leaves	Decoction in red wine (<i>Vitis vinifera</i> var. <i>aglianico</i>) is used as a mouth wash and gargle. It isn't swallowed because it is considered poisonous.	Analgesic (for toothache and mouth sores)	◆	None
<i>Vitis vinifera</i> var. <i>aglianico</i> (CQ-209)	Vitaceae	<i>vē tē</i>	grape vine	C	vinegar	Cloth is bathed in vinegar and placed on forehead.	Febrifuge	◆	None
						Hair is washed first with soap and water, then with vinegar.	Wash for oily hair	◆	[3]
						Mixed with salt and	Against skin	◆	None

	rubbed on skin.	nodules; anti-cyst		
	Mixed with salt and used as mouth wash.	Against toothache; anti-gingivitis	◆	None
	Mixed with <i>verderame</i> (oxidized copper, a fungicide used on cultivated plants) and used to treat <i>canero del fatone</i> , or cracked/wounded horse hooves.	♣ Heals cracked or wounded horse hooves	◆	None
wine	Used to wash wounds and lacerations (for humans and animals).	♣ Anti-septic	◆◆◆◆	[14]
	Decoction with the leaves of <i>Verbascum sinuatum</i> L. is used as a mouth wash and gargle. It isn't swallowed because it is considered poisonous.	Analgesic (for toothache and mouth sores)	◆	None
	Mixed with bread crumbs, and then rubbed onto skin to treat contact dermatitis caused by a stinging caterpillar crawling on skin.	Anti-dermatitis; anti-inflammatory	◆	None
	Applied topically in ritual healing of <i>mal vjntē</i> (wind illness).	Against <i>mal vjntē</i> (wind illness)	◆	None
wine or vinegar	Mixed with durum wheat flour, and then used to	Cast for broken or	◆	None

coat a rough canvas material (<i>stoppe</i>) to make a hard cast for setting bones.	severely bruised bones
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Status: C: cultivated; SC: semi-cultivated (including plants managed in the wild); W: wild. *Consensus Index/ Spontaneous Quotation Frequency for remedies*:

◆: quoted by < 10% of informants; ◆◆: quoted by 10- 20% of informants; ◆◆◆: quoted by 21-30% of informants; ◆◆◆◆: quoted by 31-40% of informants; ◆◆◆◆◆: quoted by > 41% of informants. ♣: Ethnoveterinary application.

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