

Original Article

Treatment of Organic Livestock with Medicinal Plants: A Systematic Review of European Ethnoveterinary Research

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Table 1. Therapeutic classification, medicinal plants and target animal species of European Ethnoveterinary use Reports (EEVR)

ATCvet	Sub ATCvet	Total EEVR	Plant families	Plant species	Target animal species (number of EEVR)									Number of papers
					Cattle*	Small rum.	Pig	Poultry	Equine	Rabbit	All sp.	Others	nf	
QA	all	532	60	205	206	87	30	24	38	15	22	6	104	43
	nf	247	52	145	89	26	19	12	24	12	--	6	62	24
	QA01	16	7	7	5	4	1	1	3	--	--	--	2	5
	QA03	112	29	51	57	28	--	--	5	2	10	--	10	19
	QA04	1	1	1	--	--	--	--	--	--	--	--	1	1
	QA05	10	7	7	--	3	--	2	--	--	--	--	5	7
	QA06	54	20	26	16	13	3	3	3	--	4	2	10	14
	QA07	91	28	49	39	13	7	6	3	1	8	1	13	23
	QA12	1	1	1	--	--	--	--	--	--	--	--	1	1
QC	all	28	12	17	9	4	--	--	3	--	--	7	5	10
	nf	3	2	2	1	--	--	--	--	--	--	--	2	2
	QC02	1	1	1	--	--	--	--	--	--	--	1	--	1
	QC03	24	9	14	8	4	--	--	3	--	--	6	3	7
QD	all	441	60	190	114	50	21	2	89	3	12	24	126	46
	nf	198	52	126	50	16	11	2	48	1	1	11	58	26
	QD01	14	11	11	4	--	--	--	--	2	--	5	3	6
	QD03	193	42	96	50	18	10	--	34	--	11	8	62	36
	QD08	4	4	4	1	1	--	--	--	--	--	--	2	3
	QD51	32	12	17	9	15	--	--	7	--	--	--	1	12
QG	all	308	53	150	133	55	11	17	4	6	1	4	77	38
	nf	95	32	65	39	15	3	13	1	--	--	3	21	8
	QG01	38	15	21	30	--	5	--	1	--	--	--	2	6
	QG02	66	27	42	23	20	--	--	--	1	1	--	21	13
	QG03	18	13	14	4	4	2	4	--	1	--	1	2	11
	QG04	25	13	22	3	2	--	--	2	1	--	--	17	7
	QG52	66	25	42	34	14	1	--	--	3	--	--	14	25
QJ	all	59	23	38	5	12	11	10	8	2	--	6	5	20
	nf	51	18	32	5	12	9	10	7	2	--	2	4	16
	QJ05	8	6	7	--	--	2	--	1	--	--	3	1	6
QL	all	1	1	1	1	--	--	--	--	--	--	--	--	1
	nf	1	1	1	1	--	--	--	--	--	--	--	--	1
QM	all	95	31	55	21	18	--	--	19	--	3	3	31	16
	nf	85	30	52	17	18	--	--	18	--	1	2	29	14
	QM01	1	1	1	1	--	--	--	--	--	--	--	--	1
	QM02	9	5	6	3	--	--	--	1	--	2	1	2	4
QN	all	45	21	31	6	8	2	1	10	--	--	1	17	13
	nf	32	15	20	4	6	2	1	9	--	--	1	9	6
	QN02	12	11	11	2	2	--	--	1	--	--	--	7	8
	QN05	1	1	1	--	--	--	--	--	--	--	--	1	1

ATCvet	Sub ATCvet	Total EEVR	Plant families	Plant species	Target animal species (number of EEVR)									Number of papers
					Cattle*	Small rum.	Pig	Poultry	Equine	Rabbit	All sp.	Others	nf	
QP	all	278	49	111	56	44	8	41	32	4	4	17	72	43
	nf	107	34	68	14	14	2	21	13	--	--	5	38	13
	QP51	1	1	1	--	--	--	1	--	--	--	--	--	1
	QP52	67	22	32	24	12	--	4	13	--	1	5	8	20
	QP53	103	26	48	18	18	6	15	6	4	3	7	26	30
QR	all	114	29	67	27	14	1	7	24	2	2	3	34	24
	nf	83	25	50	23	10	1	5	24	--	2	--	18	18
	QR02	1	1	1	--	--	--	--	--	--	--	--	1	1
	QR05	30	13	21	4	4	--	2	--	2	--	3	15	12
QS	all	30	12	23	7	6	--	--	7	--	--	2	8	13
	nf	6	6	6	1	2	--	--	--	--	--	--	3	2
	QS01	24	9	18	6	4	--	--	7	--	--	2	5	11
nf		289	68	183	31	31	18	18	15	8	3	8	158	20
feed additives		348	47	169	39	76	73	40	28	48	5	18	27	27
Other indications		120	28	64	19	36	13	2	13	5	7	4	20	32
Total		2688	102	590	652	441	188	162	290	93	58	98	684	75

ATCvet = Anatomical Therapeutic Chemical Classification System for veterinary medicinal products; EEVR = European Ethnoveterinary use Reports; All sp. = Treatment clearly directed to all animal species; Others = other animal species (e.g. dog, cat); QA = Alimentary tract and metabolism; QA01 = Stomatological preparation; QA03 = Drugs for functional gastrointestinal disorders; QA04 = Antiemetics and antinauseants; QA05 = Bile and liver therapy; QA06 = Drugs for constipation; QA07 = Antidiarrheals, intestinal anti-inflammatory/antiinfective agents; QA12 Mineral supplements; QC = Cardiovascular system; QC03 = Diuretics; QD = Dermatologicals; QD01 = Antifungals for dermatological use; QD03 = Preparation for treatment of wounds and ulcers; QD08 = Antiseptic and disinfectants; QD51 = Products for the treatment of claws and hoofs; QG = Genito urinary system and sex hormones; QG01 = Gynecological antiinfectives and antiseptics; QG02 = Other gynecologicals; QG03 = Sex hormones and modulators of the genital system; QG04 = Urologicals; QG52 = Products for teats and udder; QJ = Antiinfectives for systemic use; QL = Antineoplastic and immunomodulating agents; QM = Musculo --skeletal system; QM01 = Antiinflammatory and antirheumatic products; QM02 = Topical products for joint and muscular pain; QN = Nervous system; QN02 = Analgesics; QN05 = Psycholeptics; QP = Antiparasitic products, insecticides and repellents; QP52 = Anthelmintics; QP53 = Ectoparasiticides, insecticides and repellents; QR = Respiratory system; QR05 = Cough and cold preparations; QS = Sensory organs; QS01 = Ophthalmologicals; nf = Not further specified; Feed additives = Feed, fodder or feed additives.

*Including 22 EEVRT for not further specified ruminants.

Table 2. Plant species most frequently mentioned in European Ethnoveterinary use Reports (EEVR) linked to a classification according to the ATCvet code (EEVRT) and their number of referring papers and countries

ATCvet code ^a	Description of ATCvet code	Target animal species ^b	Plant species	EEVRT ^c	Total number of papers: number of paper per country ^d
QA all	alimentary tract and metabolism	total	<i>Malva sylvestris</i> L.	26	12: 3 ES [21, 35, 52]; 9 IT [23, 42, 55, 58, 59, 63, 81, 87, 98]
			<i>Vitis vinifera</i> L.	17	5: 4 IT [23, 42, 87, 98]; 1 CR [101]
			<i>Matricaria chamomilla</i> L.	15	7: 1 CH [22]; 6 IT [41, 42, 58, 63, 87, 98]
			<i>Salix alba</i> L.	14	7: 7 IT [23, 58-61, 70, 96, 98]
			<i>Hordeum vulgare</i> L.	13	2: 2 IT [42, 98]
			<i>Mercurialis annua</i> L.	12	7: 7 IT [23, 44, 48, 55, 61, 87, 88]
			<i>Fraxinus ornus</i> L.	11	5: 5 IT [23, 47, 48, 59, 98]
			<i>Linum usitatissimum</i> L.	11	3: 1 CH [22]; 2 IT [23, 98]
			<i>Quercus ilex</i> L.	10	2: 2 ES [21, 52]
			<i>Artemisia absinthium</i> L.	9	6: 1 ES [52]; 5 IT [23, 58, 59, 82, 98]
			<i>Sambucus nigra</i> L.	9	4: 2 ES [21, 52]; 2 IT [23, 98]
			<i>Apium nodiflorum</i> L. Lag.	8	4: 4 IT [23, 42, 82, 98]
			<i>Achillea millefolium</i> L.	7	6: 1 ES [35], 1 RO [80], 2 IT [84, 99], 1 RS [86]
			<i>Cupressus sempervirens</i> L.	7	2: 2 IT [23, 98]
			<i>Sempervivum tectorum</i> L.	7	3: 3 IT [23, 60, 98]
			<i>Allium cepa</i> L.	6	3: 3 IT [42, 58, 98]
			<i>Laurus nobilis</i> L.	6	2: 1 ES [38]; 1 IT [98]
			<i>Linum strictum</i> L. S.l.	6	1: 1 IT [42]

ATCvet code ^a	Description of ATCvet code	Target animal species ^b	Plant species	EEVRT ^c	Total number of papers: number of paper per country ^d
			<i>Lycopersicon esculentum</i> Mill.	6	4 : 4 IT [55, 63, 87, 98]
			<i>Olea europaeae</i> L.	6	3: 1 ES [37]; 2 IT [42, 98]
			<i>Allium sativum</i> L.	5	1: 1 IT [98]
			<i>Ficus carica</i> L.	5	3: 1 ES [37]; 2 IT [58, 98]
			<i>Oryza sativa</i> L.	5	3: 1 ES [21]; 2 IT [23, 98]
			<i>Solanum nigrum</i> L.	5	2: 2 IT [23, 98]
			<i>Ulmus minor</i> Mill.	5	2: 2 IT [23, 98]
			<i>Vicia faba</i> L.	5	2: 2 IT [42, 98]
QA03	drugs for functional gastrointestinal disorders	all ruminants	<i>Salix alba</i> L.	11	5: 4 IT [23, 58, 60, 70]; 1 TR [96]
			<i>Malva sylvestris</i> L.	6	5: 2 ES [35, 52]; 3 IT [23, 55, 63]
			<i>Matricaria chamomilla</i> L.	6	3: 3 IT [42, 63, 87]
QA06	drugs for constipation	all ruminants	<i>Mercurialis annua</i> L.	6	3: 3 IT [44, 48, 87]
			<i>Vitis vinifera</i> L.	5	2: 2 IT [42, 87]
QA07	antidiarrheals, intestinal anti-inflammatory/antiinfective agents	all ruminants	<i>Quercus ilex</i> L.	7	2: 2 ES [21, 52]
QC03	diuretics	total	<i>Arctosyaphylos uva-ursi</i> L.	6	1: 1 ES [21]
QD all	dermatologicals	total	<i>Scrophularia canina</i> L.	19	5: 1 ES [52]; 4 IT [58, 63, 81, 98]
			<i>Malva sylvestris</i> L.	16	7: 1 CH [22]; 2 ES [35, 52]; 4 IT [42, 56, 63, 98]
			<i>Hypericum perforatum</i> L.	14	8: 1 CH [22]; 3 ES [35, 38, 52]; 4 IT [23, 59, 91, 98]
			<i>Plantago major</i> L. s. l.	14	7: 7 IT [23, 42, 61, 63, 84, 98, 99]
			<i>Pinus halepensis</i> Mill.	9	1: 1 IT [23]

ATCvet code ^a	Description of ATCvet code	Target animal species ^b	Plant species	EEVRT ^c	Total number of papers: number of paper per country ^d
			<i>Parietaria officinalis</i> L.	8	3: 3 IT [42, 48, 98]
			<i>Quercus pubescens</i> Willd.	8	2: 2 IT [58, 98]
			<i>Sambucus nigra</i> L.	8	7: 5 IT [23, 42, 49, 56,
			<i>Lupinus albus</i> L.	7	4: 4 IT [48, 49, 55, 72]
			<i>Vitis vinifera</i> L.	7	5: 1 CR [101]; 4 IT [23, 70, 91, 98]
			<i>Olea europeae</i> L.	6	4: 1 ES [21]; 3 IT [42, 56, 98]
			<i>Quercus</i> sp.	6	1: 1 IT [87]
			<i>Triticum aestivum</i> L.	6	5: 5 IT [23, 56, 58, 72, 98]
			<i>Umbilicus rupestris</i> Salisb. Dandy	6	2: 1 ES [52]; 1 IT [42]
			<i>Allium sativum</i> L.	5	3: 2 IT [42, 98]; 1 TR [69]
			<i>Ecballium elaterium</i> L. A. Rich.	5	3: 3 IT [87, 88, 98]
			<i>Equisetum telemateia</i> Ehrh.	5	2: 2 IT [23, 98]
			<i>Marrubium vulgare</i> L.	5	2: 1 ES [52]; 1 IT [98]
			<i>Stachys officinalis</i> L. Trev.	5	2: 2 IT [23, 98]
			<i>Ulmus minor</i> Mill.	5	4: 3 IT [55, 56, 98]; 1 TR [69]
QD03	preparations for treatment of wounds and ulcers	total	<i>Malva sylvestris</i> L.	11	5: 1 CH [22]; 2 ES [35, 52]; 1 IT [42]
			<i>Hypericum perforatum</i> L.	10	8: 1 CH [22]; 3 ES [35, 38, 52]; 4 IT [23, 59, 91, 98]
			<i>Plantago major</i> L. s. l.	9	5: 5 IT [23, 42, 61, 84, 99]
			<i>Scrophularia canina</i> L.	9	3: 1 ES [52]; 2 IT [58, 63]
			<i>Umbilicus rupestris</i> Salisb. Dandy	6	2: 1 ES [52]; 1 IT [42]
QD51	products for the treatment of claws and hoofs	total	<i>Pinus halepensis</i> Miller	4	1: 1 IT [23]

ATCvet code ^a	Description of ATCvet code	Target animal species ^b	Plant species	EEVRT ^c	Total number of papers: number of paper per country ^d
			<i>Scrophularia canina</i> L.	4	3: 1 ES [52]; 2 IT [63, 81]
			<i>Teucrium chamaedrys</i> L.	4	1: 1 IT [23]
QG	genito urinary system and sex hormones	total	<i>Malva sylvestris</i> L.	21	5: 1 ES [21]; 4 IT [23, 75, 87, 98]
			<i>Vitis vinifera</i> L.	14	5: 5 IT [23, 42, 55, 87, 98]
			<i>Urtica dioica</i> L.	11	4: 4 IT [23, 41, 48, 98]
			<i>Parietaria diffusa</i> M. Et K.	10	3: 1 ES [21]; 2 IT [23, 98]
			<i>Hedera helix</i> L. S. L.	8	4: 1 ES [52]; 3 IT [23, 42, 61]
			<i>Matricaria chamomilla</i> L.	8	3: 3 IT [44, 61, 98]
			<i>Mercurialis annua</i> L.	7	3: 3 IT [23, 87, 98]
			<i>Avena sativa</i> L.	6	3: 3 IT [23, 87, 98]
			<i>Triticum aestivum</i> L.	6	2: 1 ES [21]; 1 IT [59]
			<i>Foeniculum vulgare</i> Mill.	5	3: 1 ES [21]; 2 IT [23, 98]
			<i>Hypericum perforatum</i> L.	5	4: 1 CH [22]; 1 ES [38]; 1 IT [93]; 1 TR [89]
QG01	gynecological antiinfectives and antiseptics	total	<i>Malva sylvestris</i> L.	10	1: 1 ES [21]
			<i>Parietaria diffusa</i> M. et K.	6	1: 1 ES [21]
QG52	products for teats and udder	cattle	<i>Vitis vinifera</i> L.	7	2: 2 IT [23, 42]
			<i>Malva sylvestris</i> L.	4	4: 1 ES [21]; 3 IT [23, 56, 75]
			<i>Hypericum perforatum</i> L.	3	2: 1 IT [93]; 1 TR [89]
QP	antiparasitic products, insecticides and repellents	total	<i>Allium sativum</i> L.	19	8: 1 ES [38]; 7 IT [23, 42, 56, 57, 63, 87, 98]
			<i>Lupinus albus</i> L.	13	6: 1 ES [52]; 5 IT [23, 55, 57, 87, 98]
			<i>Artemisia absinthium</i> L.	12	7: 6 IT [23, 57, 74, 84, 98, 99]; 1 RS [64]

ATCvet code ^a	Description of ATCvet code	Target animal species ^b	Plant species	EEVRT ^c	Total number of papers: number of paper per country ^d
			<i>Olea europaea</i> L.	9	5: 1 ES [21]; 4 IT [42, 59, 61, 98]
			<i>Ruta chalapensis</i> L.	9	4: 3 ES [21, 37, 38]; 1 IT [61]
			<i>Ruta graveolens</i> L.	9	4: 4 IT [57, 63, 70, 98]
			<i>Fraxinus ornus</i> L.	8	3: 3 IT [23, 57, 98]
			<i>Veratrum album</i> L.	7	7: 7 IT [48, 63, 74, 84, 98-100]
			<i>Vitis vinifera</i> L.	7	4: 1 CR [101]; 1 ES [21]; 2 IT [42, 98]
			<i>Juglans regia</i> L.	6	3: 3 IT [57, 70, 98]
			<i>Juniperus oxycedrus</i> L.	6	4: 1 ES [37]; 1 IT [98]; 2 TR [66, 102]
			<i>Nicotiana tabacum</i> L.	6	4: 4 IT [23, 42, 57, 98]
			<i>Calamintha nepeta</i> (L.)	5	3: 3 IT [57, 59, 98]
QP52	anthelmintics	all ruminants	<i>Ruta chalapensis</i> L.	6	2: 1 ES [38]; 1 IT [61]
			<i>Allium sativum</i> L.	5	3: 1 ES [38]; 2 IT [57, 87]
QP53	ectoparasiticides, insecticides and repellents	cattle	<i>Artemisia absinthium</i> L.	4	2: 1 IT [57]; 1 RS [64]
			<i>Veratrum album</i> L.	3	2: 2 IT [57, 63]
		small ruminants	<i>Digitalis thapsi</i> L.	2	1: 1 ES [52]
			<i>Juniperus oxycedrus</i> L.	2	1: 1 TR [66]
			<i>Nicotiana tabacum</i> L.	2	1: 1 IT [42]
			<i>Pinus brutia</i> Ten.	2	1: 1 TR [66]
			<i>Pinus nigra</i> J.F. Arnold	2	1: 1 TR [66]
		poultry	<i>Fraxinus ornus</i> L.	5	1: 1 IT [57]
			<i>Alnus glutinosa</i> L. Gaertner	2	1: 1 IT [23]
			<i>Sambucus ebulus</i> L.	2	2: 2 IT [23, 72]
QR all	respiratory system	total	<i>Helleborus bocconei</i> Ten.	7	4: 4 IT [60, 73, 76, 98]
			<i>Vitis vinifera</i> L.	7	3: 1 ES [21]; 2 IT [42, 87]

ATCvet code ^a	Description of ATCvet code	Target animal species ^b	Plant species	EEVRT ^c	Total number of papers: number of paper per country ^d
			<i>Helleborus viridis</i> L.	5	1: 1 IT [98]
			<i>Malva sylvestris</i> L.	5	3: 1 ES [35]; 2 IT [42, 98]
			<i>Matricaria chamomilla</i> L.	5	2: 2 IT [42, 98]
QR05	cough and cold preparations	total	<i>Vitis vinifera</i> L.	4	2: 1 ES [21]; 1 IT [87]
			<i>Mentha pulegium</i> L.	3	1: 1 IT [23]
QS01	ophthalmologicals	total	<i>Consolida regalis</i> S.F. Gray	3	1: 1 IT [47]
			<i>Helleborus orientalis</i> Lam.	2	2: 2 TR [69, 96]
			<i>Nicotiana tabacum</i> L.	2	1: 1 IT [42]

^aATCvet = Anatomical Therapeutic Chemical Classification System for veterinary medicinal products.

^bTarget animal species: total = total of all the EEVRT directed to different animal species; all ruminants = EEVRT directed to cattle, small ruminant or not further specified ruminant.

^cEEVRT ((mandatory: 'scientific paper' x 'plant species unambiguously directed to veterinary use') x (if available: 'plant part used' x 'animal species treated' x 'age classification of the animal' x 'ATCvet code indication' x 'ATCvet sub-code indication')) = European Ethnoveterinary use Report closely linked to a classification according to ATCvet code.

^dCountry: CH = Switzerland; CR = Croatia; ES = Spain; IT = Italy; RO = Romania; RS = Serbia; TR = Turkey.

Table 3. Selected plant species frequently mentioned in European Ethnoveterinary use Reports (EEVR) and their levels of pharmacological and therapeutic evidence (pharmacologic studies, in vitro and in vivo studies, human and veterinary clinical trials)

ATCvet	Target animal species	Plant species	EEVRT (number of papers: number of countries)	Pharmacol.	In vitro	In vivo	Clinical human	Clinical vet	VB
QA all	total	<i>Malva sylvestris</i> L.	26 (12: 2)	+[108]	+[161]	+[162] +[163]			+[17]
		<i>Matricaria chamomilla</i> L.	15 (7: 2)	+[109]	+[16]	+[16] +[164]	+[16]	+[165] +[166]	+[17]
		<i>Salix alba</i> L.	14 (7: 1)						+[17]
		<i>Hordeum vulgare</i> L.	13 (2: 1)	+[116]					
		<i>Mercurialis annua</i> L.	12 (7: 1)				+[110]		
		<i>Linum usitatissimum</i> L.	11 (3: 2)	+[16] +[109]	+[109]	+[167] -[168] +[169]	+[170]		+[17]
		<i>Artemisia absinthium</i> L.	9 (6: 2)	+[171]		+[172] +[173] +[174]	+[175] +[176]		+[17]
		<i>Sambucus nigra</i> L.	9 (4: 2)	+[177]	+[178] +[179] +[180]	+[181]	+[182]		+[17]
		<i>Achillea millefolium</i> L.	7 (6: 4)	+[111] +[112]	+[111] +[183]	+[184] +[16] +[185] +[186]	+[113]		+[17]
		<i>Allium sativum</i> L.	5 (1: 1)	+[109]		-[187]		+[115]	+[17]
QA03	all ruminants	<i>Salix alba</i> L.	11 (5: 2)			+[114]			+[17]
		<i>Malva sylvestris</i> L.	6 (5: 2)	+[188] +[189]					+[17]
		<i>Matricaria chamomilla</i> L.	6 (3: 1)	+[109]	+[109]	+[190]	+[109] +[191]	+[165]	+[17] +[16]
QA07	all ruminants	<i>Quercus ilex</i> L.	7 (2: 1)	+[117] +[118]					
QD all	total	<i>Scrophularia canina</i> L.	19 (5: 2)	+[120] +[121] +[122]					

ATCvet	Target animal species	Plant species	EEVRT (number of papers: number of countries)	Pharmacol.	In vitro	In vivo	Clinical human	Clinical vet	VB
		<i>Malva sylvestris</i> L.	16 (7: 3)	+ [108] + [129] + [192]	+ [128] + [161]	+ [130]			
		<i>Hypericum perforatum</i> L.	14 (8: 3)	+ [16] + [193]	+ [193] + [194]	+ [195]	+ [196] + [197] + [198]	+ [163] + [16]	+ [17]
		<i>Plantago major</i> L. s. l.	14 (7: 1)	+ [127] + [17]	+ [199] + [200]	+ [201]		+ [17] + [16]	
		<i>Pinus halepensis</i> Miller	9 (1:1)	+ [123] + [124] + [125]					
		<i>Sambucus nigra</i> L.	8 (7: 2)	+ [202]	+ [203] + [204]				+ [17]
		<i>Lupinus albus</i> L.	7 (4: 1)	+ [205]					
		<i>Allium sativum</i> L.	5 (3: 2)	+ [206]	+ [207]	+ [208]	- [209]		+ [17]
QD03	total	<i>Malva sylvestris</i> L.	11 (5: 3)	+ [108]	+ [128]	+ [210] + [131]			
		<i>Hypericum perforatum</i> L.	10 (8: 3)	+ [16] + [193]	+ [193] + [194]	+ [195] + [211] + [212]	+ [196] + [197] + [198]		+ [17] + [16]
		<i>Scrophularia canina</i> L.	9 (3: 2)	+ [120] + [121] + [122]					
		<i>Plantago major</i> L. s. l.	9 (5: 1)	+ [127] + [17]	+ [199] + [213]	+ [201]			+ [17] + [16]
QD51	total	<i>Scrophularia canina</i> L.	4 (3: 2)	+ [120] + [121] + [122]					
		<i>Pinus halepensis</i> Miller	(4 (1: 1)	+ [126]					
QG	total	<i>Malva sylvestris</i> L.	20 (5: 2)						
		<i>Matricaria chamomilla</i> L.	8 (3:1)	+ [190]	+ [190] + [214]	+ [215] + [216] + [217]	+ [218]		
QG01	total	<i>Malva sylvestris</i> L.	10 (1:1)	+ [189]	+ [135] + [128]				

ATCvet	Target animal species	Plant species	EEVRT (number of papers: number of countries)	Pharmacol.	In vitro	In vivo	Clinical human	Clinical vet	VB
QG52	total	<i>Malva sylvestris</i> L.	4 (4: 2)	+ [189]	+ [135] + [128]	+ [163] + [163]			+ [17]
		<i>Hypericum perforatum</i> L.	3 (3: 2)	+ [137] + [136]					+ [17]
QP	total	<i>Allium sativum</i> L.	19 (8: 2)	+ [16] + [145] + [146]	- [219] + [147]	+ [144]	+ [148]	- [150] + [149]	
		<i>Artemisia absinthium</i> L.	12 (7: 2)	+ [220] + [221] + [153]	+ [151] + [222]	+ [152] + [223]			
		<i>Lupinus albus</i> L.	13 (6: 2)	? [156] ? [155]					
		<i>Ruta chalapensis</i> L.,	9 (4: 2)		+ [160]				
		<i>Juniperus oxycedrus</i> L.	6 (4: 3)		+ [224] + [225] + [157]	+ [68]			
		<i>Nicotiana tabacum</i> L.	6 (4: 1)	+ [226] + [158]	+ [227] + [228] + [229]	+ [227] + [228]	+ [227] + [228]		
QP52	all ruminants	<i>Allium sativum</i> L.	5 (3: 2)	+ [16] + [145]	- [219] + [147] + [146]		+ [148]	- [150]	
		<i>Ruta chalapensis</i> L.,	6 (2: 2)		+ [160]				
		<i>Ruta graveolens</i> L.	2 (2: 1)				+ [230]		
QP53	total	<i>Lupinus albus</i> L.	6 (4: 1)	? [155] ? [156]					
	cattle	<i>Artemisia absinthium</i> L.	4 (2: 2)	+ [231]					
	small ruminants	<i>Juniperus oxycedrus</i> L.	2 (1: 1)		+ [157]				
QR all	total	<i>Helleborus</i> spp.	19 (9: 3)	+ [142]		+ [141]			
		<i>Malva sylvestris</i> L.	5 (3: 2)	+ [108] + [189]	+ [189]	+ [189]			+ [17]
		<i>Matricaria chamomilla</i> L.	5 (2: 1)	+ [109]	+ [232]		+ [139] + [191]		

ATCvet = Anatomical Therapeutic Chemical Classification System for veterinary medicinal products; EEVRT = European Ethnoveterinary use Report closely linked to a classification according to ATCvet code; Total = total of all the EEVRT directed to different animal species; All ruminants = EEVRT directed to cattle, small ruminant or not further specified ruminant; QA = alimentary tract and metabolism; QA03 = drugs for functional gastrointestinal disorders; QA07 = antidiarrheals, intestinal anti-inflammatory/antiinfective agents; QD = dermatologicals; QD03 = preparation for treatment of wounds and ulcers; QD51 = products for the treatment of claws and hoofs; QG = genito urinary system and sex hormones; QG01 = gynecological antiinfectives and antiseptics; QG52 = products for teats and udder; QP = antiparasitic products, insecticides and repellents; QP52 = anthelmintics; QP53 = ectoparasiticides, insecticides and repellents; QR = respiratory system.

Pharmacol. = pharmacologic studies and chemical composition; in vitro = in vitro studies; in vivo = in vivo studies; clinical human = clinical studies and trials in human medicine; clinical vet = clinical studies and trials in veterinary medicine; VB = veterinary phytotherapy text book and manuals; + = cited paper might support the ethnoveterinary use of the plant for the connected ATCvet-code; - = cited paper does not support the ethnoveterinary use of the plant connected to this ATCvet-code; ? = cited paper does not support directly the ethnoveterinary use, but its information might be correlated to the ethnoveterinary use of the plant connected to this ATCvet code.
