

Supporting Information

Discovery of Bioactive Natural Products for the Treatment of Acute Respiratory Infection - An Integrated Approach*

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*Dedicated to “Women in Natural Products Science”.

Table 1S Source or sample location (including voucher specimen or charge number) of used natural materials.

Species	Family	Organ	Source/sample location	Voucher specimen/charge number
<i>Abutilon theophrasti</i> Medik.	Malvaceae	seeds	Plantasia GmbH, Oberndorf bei Salzburg, Austria	230302
<i>Aegle marmelos</i> (L.) Corrêa	Rutaceae	fruit	Padma AG, Wetzikon, Switzerland	20982301
<i>Allium sativum</i> var. <i>sativum</i> L.	Amaryllidaceae	bulb	Kottas Pharma GmbH, Vienna, Austria	18296901
<i>Anchieta pyrifolia</i> (Mart.) G. Don	Violaceae	herb	extract provided by Universidade Federal de Santa Catarina, Florianópolis, Brazil	AncpyrH_UFSC1 (stored at Universidade Federal de Santa Catarina, Florianópolis, Brazil)
<i>Andographis paniculata</i> (Burm. F.) Nees	Acanthaceae	herb	Plantasia GmbH, Oberndorf bei Salzburg, Austria	780672
<i>Angelica sinensis</i> (Oliv.) Diels	Apiaceae	root	Plantasia GmbH, Oberndorf bei Salzburg, Austria	780023
<i>Annona squamosa</i> L.	Annonaceae	seeds	Plantasia GmbH, Oberndorf bei Salzburg, Austria	A1231-001
<i>Aquilegia vulgaris</i> L.	Ranunculaceae	herb	Padma AG, Wetzikon, Switzerland	21290300
<i>Arctostaphylos uva-ursi</i> (L.) Spreng.	Ericaceae	leaves	Kottas Pharma GmbH, Vienna, Austria	P11308309
<i>Arisaema</i> sp.	Araceae	rhizome	Plantasia GmbH, Oberndorf bei Salzburg, Austria	820142
<i>Artemisia absinthum</i> L.	Asteraceae	herb	Kottas Pharma GmbH, Vienna, Austria	KLA91098
<i>Artemisia anomala</i> S. Moore	Asteraceae	herb	Plantasia GmbH, Oberndorf bei Salzburg, Austria	840573
<i>Artemisia argyi</i> Levl. & Vant.	Asteraceae	leaves	Plantasia GmbH, Oberndorf bei Salzburg, Austria	770743
<i>Artemisia vulgaris</i> L.	Asteraceae	herb	Ehnbachklamm, Zirl, Austria	JR-20120801-A10
<i>Aster tataricus</i> L.f.	Asteraceae	root	Plantasia GmbH, Oberndorf bei Salzburg, Austria	040106
<i>Azadirachta indica</i> A.Juss.	Meliaceae	fruit	Padma AG, Wetzikon, Switzerland	21108301
<i>Boswellia serrata</i> Roxb. ex Colebr.	Burseraceae	resin	extract provided by Prof. Dr. Oliver Werz, Pharmaceutical / Medicinal Chemistry, University of Jena, Germany obtained from Hecht Pharma, Stinzedt, Germany	WeiF3aRE (stored at University of Jena, Germany)
<i>Buddleja officinalis</i> Maxim.	Loganiaceae	flowers	Plantasia GmbH, Oberndorf bei Salzburg, Austria	320697
<i>Burkea africana</i> Hook.	Fabaceae	bark/	northwest of Zeerust, South Africa	5858

Species	Family	Organ	Source/sample location	Voucher specimen/charge number
		heartwood		
<i>Calamintha menthifolia</i> L.	Lamiaceae	herb	Ehnbachklamm, Zirl, Austria	JR-20120801-A4
<i>Calendula officinalis</i> L.	Asteraceae	flowers	Padma AG, Wetzikon, Switzerland	21348300
<i>Capsella bursa-pastoris</i> (L.) Medik.	Brassicaceae	herb	Kottas Pharma GmbH, Vienna, Austria	1223296
<i>Carlina acaulis</i> L.	Asteraceae	herb	Lattensee, Mösern, Austria	JR-20120801-B6
<i>Carlina acaulis</i> L.	Asteraceae	root	Lattensee, Mösern, Austria	JR-20120801-B6
<i>Carum carvi</i> L.	Apiaceae	fruit	Kottas Pharma GmbH, Vienna, Austria	W12202542
<i>Castanea sativa</i> Mill.	Fagaceae	leaves	Apotheke zur Universität, Innsbruck, Austria	005305
<i>Centaurea ragusina</i> L.	Asteraceae	leaves	Katalinić brig, Sustipan, Split, Croatia (collected and identified by M. Ruščić, Department of Biology, University of Split, Croatia)	FSS-CR112016 (stored at Department of Biology, University of Split, Croatia)
<i>Cetraria islandica</i> (L.) Ach.	Parmeliaceae	thallus	Kottas Pharma GmbH, Vienna, Austria	0041257#1
<i>Chenopodium ambrosioides</i> (L.) Mosyakin & Clemants	Amaranthaceae	leaves	extract provided by Universidade Federal de Santa Catarina, Florianópolis, Brazil	CheambF_UFSC2 (stored at Universidade Federal de Santa Catarina, Florianópolis, Brazil)
<i>Chrysanthemum indicum</i> L.	Asteraceae	flowers	Plantasia GmbH, Oberndorf bei Salzburg, Austria	020686
<i>Cinnamomum mairei</i> H.Lév.	Lauraceae	bark	Plantasia GmbH, Oberndorf bei Salzburg, Austria	771408
<i>Cordia curassavica</i> (Jacq.) Roem. & Schult.	Boraginaceae	leaves	extract provided by Universidade Federal de Santa Catarina, Florianópolis, Brazil	CorcurF_UFSC3 (stored at Universidade Federal de Santa Catarina, Florianópolis, Brazil)
<i>Cynanchum paniculatum</i> (Bunge) Kitag. ex H.Hara	Apocynaceae	root	Plantasia GmbH, Oberndorf bei Salzburg, Austria	840274
<i>Cynanchum stauntonii</i> (Decne.) Schltr. ex H.Lév.	Apocynaceae	root	Plantasia GmbH, Oberndorf bei Salzburg, Austria	310051
<i>Cynomorium songaricum</i> Rupr.	Cynomoriaceae	herb	Plantasia GmbH, Oberndorf bei Salzburg, Austria	420514
<i>Daucus carota</i> L.	Apiaceae	herb	Zirl, Austria	JR-20120801-A8
<i>Drynaria fortunei</i> (Kunze) J. Sm.	Polypodiaceae	rhizome	Plantasia GmbH, Oberndorf bei Salzburg, Austria	030161
<i>Elettaria cardamomum</i> (L.) Maton	Zingiberaceae	fruit	Padma AG, Wetzikon, Switzerland	21391101
<i>Epimedium sagittatum</i> (Sieb. & Zucc.) Maxim.	Berberidaceae	herb	Plantasia GmbH, Oberndorf bei Salzburg, Austria	310581
<i>Equisetum arvense</i> L.	Equisetaceae	herb	Kottas Pharma GmbH, Vienna, Austria	K3-77/80

Species	Family	Organ	Source/sample location	Voucher specimen/charge number
<i>Equisetum hiemale</i> L.	Equisetaceae	herb	Plantasia GmbH, Oberndorf bei Salzburg, Austria	230541
<i>Euphrasia officinalis</i> ssp. <i>rostkoviana</i> Hayne (L.)	Orobanchaceae	herb	Lattensee, Mösern, Austria	JR-20120801-B3
<i>Evodia rutaecarpa</i> (Juss.) Benth.	Rutaceae	fruit	Plantasia GmbH, Oberndorf bei Salzburg, Austria	040377
<i>Fagopyrum esculentum</i> Moench.	Polygonaceae	seeds	Lemberona GmbH, Wien, Austria. Bio-leben (Bio Alpenbuchweizen)	VP101889B
<i>Foeniculum vulgare</i> L.	Apiaceae	fruit	Caesar & Loretz GmbH, Hilden, Germany	50946445
<i>Fomes fomentarius</i> J.J. Kickx. (strain 19)	Polyporaceae	fruit body	Neue Magdeburger Hütte (1300 m), Zirl, Austria (grown on beech)	FomfomE0019
<i>Fomitopsis pinicola</i> Karst. (strain 10)	Fomitopsidaceae	fruit body	Viggartal, Ellbögen, Austria (grown on dead spruce trunk)	FompinE0010
<i>Forsythia suspensa</i> (Thunb.) Vahl	Oleaceae	fruit	Plantasia GmbH, Oberndorf bei Salzburg, Austria	020410
<i>Fraxinus</i> sp.	Oleaceae	bark	Plantasia GmbH, Oberndorf bei Salzburg, Austria	710803
<i>Galeopsis tetrahit</i> L.	Lamiaceae	herb	Ehnbachklamm, Zirl, Austria	JR-20120801-A5
<i>Ganoderma applanatum</i> (Pers.) Pat. (strain 12)	Ganodermataceae	fruit body	Oberperfuss, Austria (grown on spruce)	GanappE0012
<i>Ganoderma lucidum</i> Karst.	Ganodermataceae	fruit body	Plantasia GmbH, Oberndorf bei Salzburg, Austria	680898
<i>Ganoderma sinense</i> Zhao, Xu & Zang	Ganodermataceae	fruit body	MRCA Mushroom Research Center Austria GmbH, Innsbruck, Austria	JR-20130120-A1
<i>Ganoderma tsugae</i> Murill.	Ganodermataceae	fruit body	MRCA Mushroom Research Center Austria GmbH, Innsbruck, Austria	JR-20130120-A2
<i>Gardenia jasminoides</i> Ellis.	Rubiaceae	fruit	Plantasia GmbH, Oberndorf bei Salzburg, Austria	110284
<i>Glechoma hederacea</i> L.	Lamiaceae	herb	Kottas Pharma GmbH, Vienna, Austria	8100105#2
<i>Gleditsia sinensis</i> Lam.	Fabaceae	fruit	Plantasia GmbH, Oberndorf bei Salzburg, Austria	820496
<i>Gloeophyllum odoratum</i> Imazeki (strain 23)	Gloeophyllaceae	fruit body	Hötting (747 m), Austria (grown on dead spruce trunk)	GloodoE0023
<i>Gloeophyllum odoratum</i> Imazeki (strain 28)	Gloeophyllaceae	fruit body	Gnadenwald, below Walderalm, Austria (grown on dead picea)	GloodoE0028
<i>Gloeophyllum odoratum</i> Imazeki (strain 54)	Gloeophyllaceae	fruit body	Oberperfuss, Austria (grown on spruce)	GloodoE0054 JR-20140310-A1
<i>Glycyrrhiza glabra</i> L.	Fabaceae	root	Kottas Pharma GmbH, Vienna, Austria	W11202430
<i>Hedera helix</i> L.	Araliaceae	leaves	Ehnbachklamm, Zirl, Austria	JR-20120801-A7
<i>Helianthus annuus</i> L.	Asteraceae	flowers	Wartberg an der Krems, Austria	JR-20120811-B1
<i>Hepatica nobilis</i> Schreb.	Ranunculaceae	leaves	Ehnbachklamm, Zirl, Austria	JR-20120801-A11
<i>Hericium erinaceus</i> (Bull.)	Hericiaceae	fruit body	Plantasia GmbH, Oberndorf bei	15140630

Species	Family	Organ	Source/sample location	Voucher specimen/charge number
Pers.			Salzburg, Austria	
<i>Imperata cylindrica</i> var. <i>major</i> (Nees) C.E. Hubb	Poaceae	root	Plantasia GmbH, Oberndorf bei Salzburg, Austria	810178
<i>Inonotus obliquus</i> (Ach. ex Pers.) Pilát	Hymenochaetaceae	fruit body	Finnland, 1998	UP-20121212-A1
<i>Ischnoderma benzoinum</i> Karst. (strain 38)	Fomitopsidaceae	fruit body	Geigerhof, Innichen / Vierschach in South Tyrol (Pustertal), Italy (grown on conifer wood)	IscbenE0038
<i>Kaempferia galanga</i> L.	Zingiberaceae	rhizome	Padma AG, Wetzikon, Switzerland	21321120
<i>Lactuca sativa</i> L.	Asteraceae	herb	Padma AG, Wetzikon, Switzerland	21400300
<i>Laetiporus sulphureus</i> (Bull.) Murrill (strain 43)	Fomitopsidaceae	fruit body	Oberperfuss, Austria (grown on deciduous tree)	LaesulE0043
<i>Lantana camara</i> L.	Verbenaceae	leaves	extract provided by Universidade Federal de Santa Catarina, Florianópolis, Brazil	LancamF_UFSC4 (stored at Universidade Federal de Santa Catarina, Florianópolis, Brazil)
<i>Lepidium apetalum</i> Willd.	Apiaceae	seeds	Plantasia GmbH, Oberndorf bei Salzburg, Austria	750299
<i>Liquidambar orientalis</i> Mill.	Hamamelidaceae	resin	historical collection, University of Innsbruck, Austria (Dittrichiana)	JR-20121107-A2
<i>Lonicera japonica</i> Thunb.	Caprifoliaceae	twigs	Plantasia GmbH, Oberndorf bei Salzburg, Austria	840850
<i>Lophaterum gracile</i> Brongn.	Poaceae	herb	Plantasia GmbH, Oberndorf bei Salzburg, Austria	770528
<i>Lycopodium clavatum</i> L.	Lycopodiaceae	herb	Lattensee, Mösern, Austria	JR-20120801-B4
<i>Lycopodium clavatum</i> L.	Lycopodiaceae	spores	Plantasia GmbH, Oberndorf bei Salzburg, Austria	321064
<i>Lycopus lucidus</i> var. <i>hirtus</i> Regel.	Lamiaceae	herb	Plantasia GmbH, Oberndorf bei Salzburg, Austria	840529
<i>Lygodium japonicum</i> (Thunb.) Sw.	Lygodiaceae	spores	Plantasia GmbH, Oberndorf bei Salzburg, Austria	840850
<i>Magnolia</i> sp.	Magnoliaceae	flowers	Plantasia GmbH, Oberndorf bei Salzburg, Austria	710696
<i>Matricaria chamomilla</i> L.	Asteraceae	flowers	Kottas Pharma GmbH, Vienna, Austria	KLA85621
<i>Melissa officinalis</i> L.	Lamiaceae	leaves	Kottas Pharma GmbH, Vienna, Austria	KLA80139
<i>Morus alba</i> L.	Moraceae	root bark	Plantasia GmbH, Oberndorf bei Salzburg, Austria	710797
<i>Nelumbo nucifera</i> Gaertn.	Nelumbonaceae	leaves	Plantasia GmbH, Oberndorf bei Salzburg, Austria	720734
<i>Nelumbo nucifera</i> Gaertn.	Nelumbonaceae	root	Plantasia GmbH, Oberndorf bei Salzburg, Austria	910195
<i>Nelumbo nucifera</i> Gaertn.	Nelumbonaceae	seeds	Plantasia GmbH, Oberndorf bei Salzburg, Austria	040349

Species	Family	Organ	Source/sample location	Voucher specimen/charge number
			Salzburg, Austria	
<i>Origanum vulgare</i> L.	Lamiaceae	herb	Laudachsee, Austria	JR-20120805-A1
<i>Papaver rhoeas</i> L.	Papaveraceae	flowers	Kottas Pharma GmbH, Vienna, Austria	KL7065
<i>Papaver somniferum</i> L.	Papaveraceae	seeds	VOG AG, Linz, Austria. (Goldpack - geriebener Graumohn)	L 070-12;01/2013
<i>Peucedanum ostruthium</i> (L.) Koch	Apiaceae	herb	Birgitzköpf, Axamer Lizum, Austria	JR-20120814-A1
<i>Peucedanum ostruthium</i> (L.) Koch	Apiaceae	root	Birgitzköpf, Axamer Lizum, Austria	JR-20120814-A1
<i>Pharbitis</i> sp.	Convolvulaceae	seeds	Plantasia GmbH, Oberndorf bei Salzburg, Austria	820293
<i>Phellinus robustus</i> (L.) Quel. (strain 25)	Hymenochaetaceae	fruit body	Hötting (852 m), Austria (grown on dead beech)	PherobE0025
<i>Pimenta dioica</i> (L.) Merr.	Myrtaceae	fruit	Padma AG, Wetzikon, Switzerland	21362100
<i>Pimpinella anisum</i> L.	Apiaceae	fruit	Kottas Pharma GmbH, Vienna, Austria	KLA91171
<i>Pimpinella major</i> (L.) Huds.	Apiaceae	root	Lattensee, Mösern, Austria	JR-20120801-B2
<i>Pinguicula vulgaris</i> L.	Lentibulariaceae	herb	Lattensee, Mösern, Austria	JR-20120801-B1
<i>Piper nigrum</i> L.	Piperaceae	fruit	Kottas Pharma GmbH, Vienna, Austria	KLA80342
<i>Piptoporus betulinus</i> Karst. (strain 29)	Fomitopsidaceae	fruit body	Vahrn bei Brixen, Italy (grown on birch)	PipbetE0039
<i>Piptoporus betulinus</i> Karst. (strain 39)	Fomitopsidaceae	fruit body	Vill, Innsbruck, Austria (grown on birch)	PipbetE0029
<i>Plantago lanceolata</i> L.	Plantaginaceae	leaves	Padma AG, Wetzikon, Switzerland	21327101
<i>Polygala senega</i> L.	Polygalaceae	root	Kottas Pharma GmbH, Vienna, Austria	K3-9/89
<i>Polygala</i> sp.	Polygalaceae	root	Plantasia GmbH, Oberndorf bei Salzburg, Austria	930101
<i>Polygala vulgaris</i> L.	Polygalaceae	herb	Kottas Pharma GmbH, Vienna, Austria	W12202702
<i>Polygonum aviculare</i> L.	Polygonaceae	herb	Padma AG, Wetzikon, Switzerland	21322100
<i>Polypodium vulgare</i> L.	Polypodiaceae	root	Kottas Pharma GmbH, Vienna, Austria	W12203208
<i>Potentilla anserinae</i> L.	Rosaceae	herb	Apotheke zur Universität, Innsbruck, Austria	W12202579
<i>Potentilla aurea</i> L.	Rosaceae	herb	Padma AG, Wetzikon, Switzerland	21161301
<i>Prunella grandiflora</i> D. Torre & Samth.	Lamiaceae	herb	Ehnbachklamm, Zirl, Austria	JR-20120801-A6
<i>Pterocarpus santalinus</i> L.f.	Fabaceae	wood	Padma AG, Wetzikon, Switzerland	20712307
<i>Pyrrosia</i> sp.	Polypodiaceae	leaves	Plantasia GmbH, Oberndorf bei	740565

Species	Family	Organ	Source/sample location	Voucher specimen/charge number
			Salzburg, Austria	
<i>Ribes nigrum</i> L.	Grossulariaceae	leaves	Gärberbach, Mutters, Austria	JR-20120802-A1
<i>Ribes nigrum</i> L.	Grossulariaceae	fruit	Gärberbach, Mutters, Austria	JR-20120802-A1
<i>Rosa canina</i> L.	Rosaceae	fruit	Kottas Pharma GmbH, Vienna, Austria	KLA60308
<i>Rosmarinus officinalis</i> L.	Lamiaceae	leaves	Kottas Pharma GmbH, Vienna, Austria	W12202655
<i>Rubus fruticosus</i> L.	Rosaceae	leaves	Adlwang, Hasenberg, Austria	JR-20120807-A1
<i>Rubus fruticosus</i> L.	Rosaceae	root	Adlwang, Hasenberg, Austria	JR-20120807-A1
<i>Ruta graveolens</i> L.	Rutaceae	herb	Kottas Pharma GmbH, Vienna, Austria	KLA3369
<i>Salvia glutinosa</i> L.	Lamiaceae	herb	Ehnbachklamm, Zirl, Austria	JR-20120801-A2
<i>Sambucus nigra</i> L.	Adoxaceae	flowers	Kottas Pharma GmbH, Vienna, Austria	KLA30241
<i>Sambucus nigra</i> L.	Adoxaceae	fruit	Andreas Hofer Straße, Absam, Austria	JR-20120828-A1
<i>Saussurea costus</i> (Falc.) Lipsch.	Asteraceae	root	Padma AG, Wetzikon, Switzerland	21280300
<i>Sclerocarya birrea</i> (A. Rich.) Hochst.	Anacardiaceae	bark/ heartwood	northwest of Zeerust, South Africa	5858/2
<i>Scrophularia nodosa</i> L.	Scrophulariaceae	herb	Grünau im Almtal, Austria	JR-20120811-A1
<i>Scrophularia nodosa</i> L.	Scrophulariaceae	root	Grünau im Almtal, Austria	JR-20120811-A1
<i>Scutellaria barbata</i> D. Don	Lamiaceae	herb	Plantasia GmbH, Oberndorf bei Salzburg, Austria	760577
<i>Sida cordifolia</i> L.	Malvaceae	herb	Padma AG, Wetzikon, Switzerland	20981300
<i>Sinomenium acutum</i> (Thunb.) Rehd. & Wils.	Menispermaceae	twigs	Plantasia GmbH, Oberndorf bei Salzburg, Austria	840856
<i>Solanum dulcamara</i> L.	Solanaceae	twigs	Kottas Pharma GmbH, Vienna, Austria	W11201578
<i>Solanum paniculatum</i> L.	Solanaceae	leaves	extract provided by Universidade Federal de Santa Catarina, Florianópolis, Brazil	SolpanF_UFSC5 (stored at Universidade Federal de Santa Catarina, Florianópolis, Brazil)
<i>Solanum pseudoquina</i> A.St.-Hil.	Solanaceae	leaves	extract provided by Universidade Federal de Santa Catarina, Florianópolis, Brazil	SolpseF_UFSC6 (stored at Universidade Federal de Santa Catarina, Florianópolis, Brazil)
<i>Solanum torvum</i> Sw.	Solanaceae	leaves	extract provided by Universidade Federal de Santa Catarina, Florianópolis, Brazil	SoltorF_UFSC6 (stored at Universidade Federal de Santa Catarina, Florianópolis, Brazil)
<i>Sophora flavescens</i> Ait.	Fabaceae	root	Plantasia GmbH, Oberndorf bei Salzburg, Austria	780013
<i>Stachys officinalis</i> L.	Lamiaceae	herb	Laudachsee, Austria	JR-20120805-A2
<i>Stachys sylvatica</i> L.	Lamiaceae	herb	Laudachsee, Austria	JR-20120805-A3
<i>Stemona</i> sp.	Stemonaceae	root	Plantasia GmbH, Oberndorf bei	390166

Species	Family	Organ	Source/sample location	Voucher specimen/charge number
			Salzburg, Austria	
<i>Styrax calamitus</i> L.	Styracaceae	resin	historical collection, University of Innsbruck, Austria (Dittrichiana)	JR-20121107_A1
<i>Syzygium aromaticum</i> (L.) Merr. & L.M.Perry	Myrtaceae	flowers	Padma AG, Wetzikon, Switzerland	21321101
<i>Terminalia chebula</i> Retz.	Combretaceae	fruit	Padma AG, Wetzikon, Switzerland	21324301
<i>Teucrium chamaedrys</i> L.	Lamiaceae	herb	Ehnbachklamm, Zirl, Austria	JR-20120801-A1
<i>Thymus pulegioides</i> L.	Lamiaceae	herb	Ehnbachklamm, Zirl, Austria	JR-20120801-A3
<i>Tilia cordata</i> Mill.	Malvaceae	flowers	Kottas Pharma GmbH, Vienna, Austria	KLA10386
<i>Trametes gibbosa</i> (Pers.) Fr. (strain 52)	Polyporaceae	fruit body	Gnadenwald, Austria (grown on beech)	TragibE0052
<i>Tussilago farfara</i> L.	Asteraceae	leaves	Lattensee, Mösern, Austria	JR-20120801-B5
<i>Vaccinium vitis-ideae</i> L.	Ericaceae	leaves	Kottas Pharma GmbH, Vienna, Austria	W11202395
<i>Valeriana officinalis</i> L.	Valerianaceae	root	Kottas Pharma GmbH, Vienna, Austria	KLA50083
<i>Verbascum densiflorum</i> Bertol.	Scrophulariaceae	flowers	Kottas Pharma GmbH, Vienna, Austria	KLA50657
<i>Verbena officinalis</i> L.	Verbenaceae	herb	Ehnbachklamm, Zirl, Austria	JR-20120801-A12
<i>Veronica officinalis</i> L.	Plantaginaceae	herb	Kottas Pharma GmbH, Vienna, Austria	P12301510
<i>Viola odorata</i> L.	Violaceae	herb	Kottas Pharma GmbH, Vienna, Austria	W12202963
<i>Viola tricolor</i> L.	Violaceae	herb	Kottas Pharma GmbH, Vienna, Austria	W11201967
<i>Viscum coloratum</i> (Komar.) Nakai	Loranthaceae	herb	Plantasia GmbH, Oberndorf bei Salzburg, Austria	230838

Table 2S continued.

		inhibition of CPE (%) of															Influence of compound treatment on cell viability (% of mean value of six untreated cell control)																							
		HK/68 in MDCK cells					CV-B3 in HeLa cells					RV-A2 in HeLa cells						HeLa cells				MDCK cells																		
code	conc. [µg/ml]	assay 1	assay 2	assay 3	assay 4	assay 5	IC ₅₀ [µg/ml]			assay 1	assay 2	assay 3	assay 4	assay 5	IC ₅₀ [µg/ml]			assay 1	assay 2	assay 3	assay 4	IC ₅₀ [µg/ml]				assay 1	assay 2	assay 3	CC ₅₀ [µg/ml]											
							95 % CI values								95 % CI values								95 % CI values							95 % CI values										
							mean	lower	upper						mean	lower	upper						mean	lower	upper					mean	lower	upper								
120	200,00																									19,90	6,80	15,10			1,70	1,70	1,50							
	100,00																									22,30	9,60	29,10			1,10	2,00	1,40							
	50,00	-6,24								3,44																27,80	12,20	28,20			1,70	2,10	1,60							
	25,00	-6,24								8,00																10,70	6,60	11,10			10,30	5,30	4,10							
	12,50	57,87	64,11	76,09						59,67	48,12	77,49	78,24	74,02				50,03	30,33	-9,34						73,80	20,50	77,70			55,70	63,50	54,00							
	6,25	21,62	2,62	44,58					16,82	13,13	30,41	58,93	62,80				44,76	13,43	8,10						90,80	55,70	89,40			77,70	84,00	68,30								
	3,13			2,57	0,55												4,07	53,12	25,46	64,49																				
	1,56				3,64							6,29	26,22	5,27	36,11																									
	IC50 [µg/ml]	10,75	10,66	3,95			8,46	4,00	14,73	10,69		1,59	1,48	0,08	3,46	0,32	4,46	15,20								not active		14,47	6,64	14,77	11,96	6,71	18,82	<6,25	<6,25	<6,25	<6,25			
125a	100,00	89,43	130,96	125,28						8,15	4,51						23,09	23,20								5,20	12,60	47,90			108,70	104,00	103,20							
	31,60	91,30	35,48	118,47						-8,07	12,59						14,58	8,27								85,00	83,00	38,90			101,80	103,70	99,70							
	10,00	48,16	40,01	14,45						-7,09	33,93						0,12	6,89								93,20	90,60	90,20			103,20	99,90	96,00							
	3,16	33,23	9,00	19,93						0,36	23,87						1,47	3,73								97,00	92,90	94,00			102,80	97,70	123,80							
	1,00																									108,50	93,90	102,70			105,10	101,50	115,60							
	0,32																									101,60	96,80	100,70			102,50	98,80	124,30							
	IC50 [µg/ml]	7,41	15,72	14,82			12,65	7,47	19,26								not active									not active		CC50 [µg/ml]	40,20	44,43	52,24	45,62	39,05	52,68	>100	>100	>100	>100		
125b	100,00	91,56	113,49	90,92						8,86	30,55	8,94	52,69				52,49	31,53	13,02							65,70	66,20	63,30			94,50	78,30	92,50							
	31,60	81,27	53,38	64,41						-8,07	34,02	-11,41	47,48				10,47	25,90	4,95							48,50	72,00	57,50			97,00	79,10	95,20							
	10,00	91,19	84,43	83,38						30,67	59,49	3,06	22,29				-2,63	9,59	11,53							106,50	42,30	79,30			98,80	78,60	90,80							
	3,16	51,24	74,55	26,00						-3,99	44,55	-2,59	25,00				-5,45	-5,23	1,70							98,80	87,10	90,60			72,70	84,70	98,80							
	1,00		5,40	3,54																						129,30	89,90	96,00			104,80	82,60	100,60							
	0,32		5,90	-0,10																						101,90	92,90	103,30			90,00	87,50	94,10							
	IC50 [µg/ml]	3,05	2,75	4,51			3,44	2,50	4,51								not active									not active		CC50 [µg/ml]	>100	>100	>100	>100		>100	>100	>100	>100			
125c	100,00	86,11								not determined								not determined														121,10	91,70	77,50						
	31,60	72,94		54,09																											121,05	97,15	90,65							
	10,00	94,04	104,54	100,63																										115,45	92,85	96,40								
	3,16	40,13	9,31	30,04																										107,55	100,00	98,20								
	1,00		0,79	1,06																																				
	0,32		-1,21																																					
	IC50 [µg/ml]	3,90	4,11	3,64			3,88	3,62	4,16																					>100	>100	>100	>100							
142	100,00	-4,91	-2,63	-2,26						-4,91	-10,54						1,81	3,44								2,70	3,40	3,30			2,90	1,90	1,70							
	31,60	93,05	57,23	71,45						10,24	-10,54						30,09	5,02								93,50	85,60	43,10			65,60	65,70	65,00							
	10,00	69,74	49,35	12,54						23,43	37,75						8,94	-0,34								95,80	82,90	68,00			81,60	83,50	80,60							
	3,16	38,55	8,67	7,09						5,89	42,80						0,18	3,50								103,10	90,90	91,10			96,90	91,80	118,70							
	1,00																									108,10	100,40	102,40			102,10	97,20	137,90							
	0,32																99,60	97,10											100,80	106,20	98,50	118,00								
	IC50 [µg/ml]	4,85	17,30	20,19			14,11	2,50	4,51							not active										not active		CC50 [µg/ml]	44,69	35,64	18,78	33,04	18,66	51,63	27,98	27,30	29,85	28,38	26,91	29,88

Fig. 1S Graphs showing (A) cell viability in MDCK cells and (B) inhibition of HK/68-induced CPE for the most active extracts.

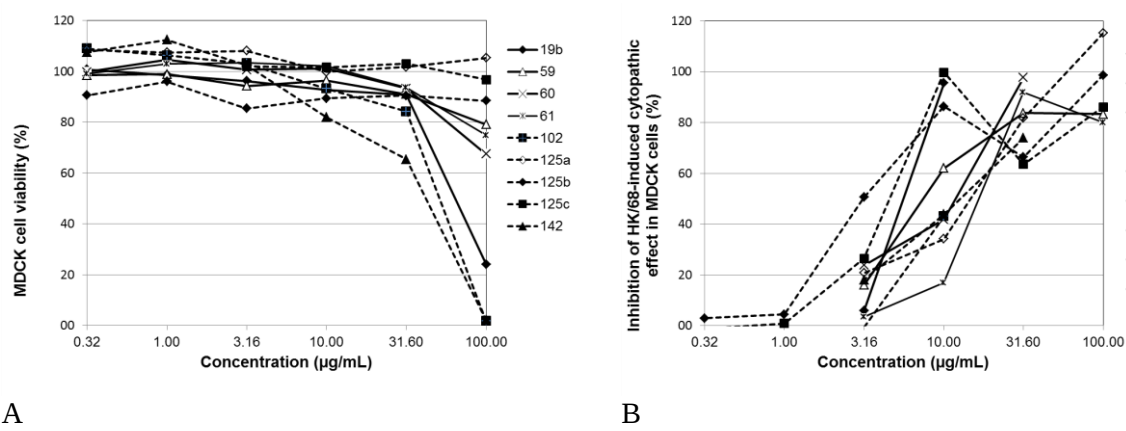
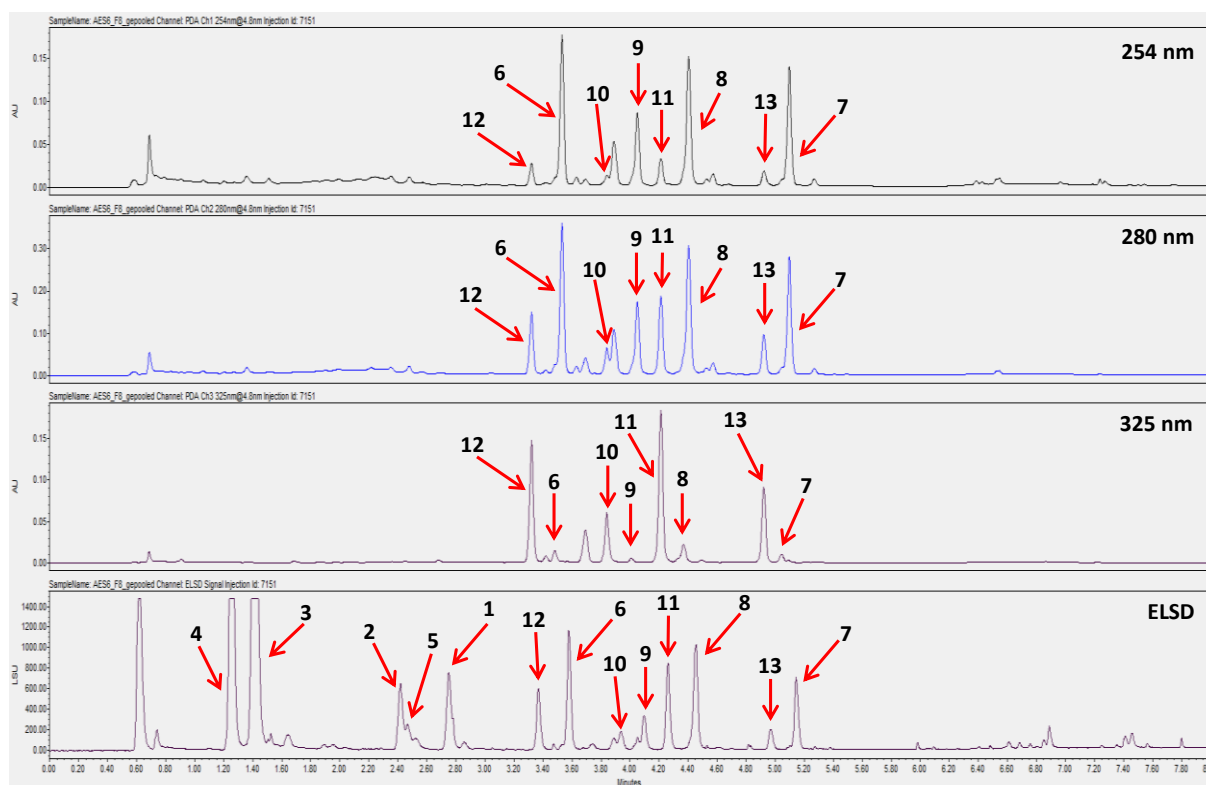
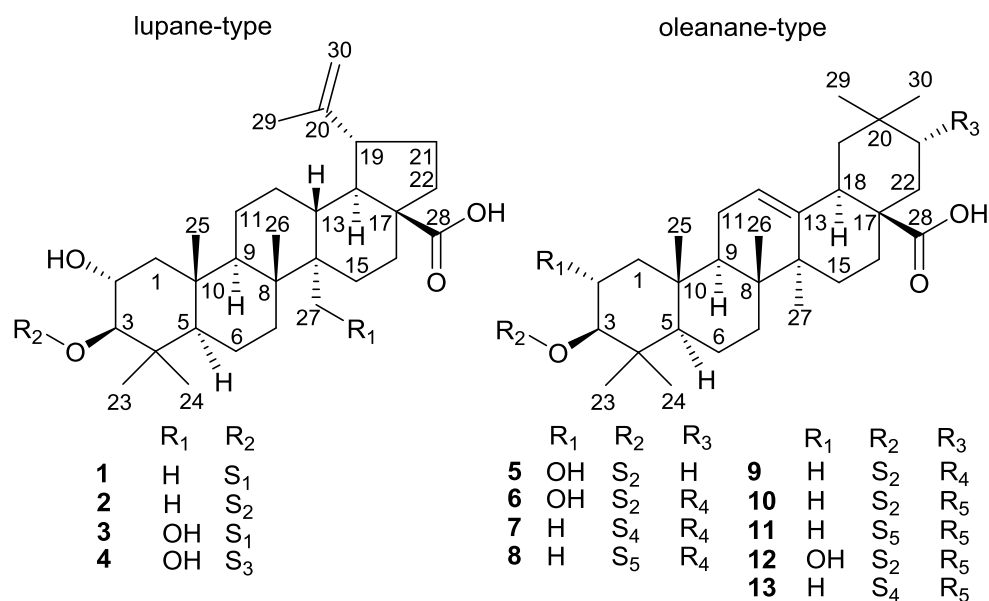


Fig. 2S UPLC analysis of *B. africana* bark extract (no. 125) containing all isolated (**1-8**) and identified (**9-13**) triterpene saponins (obtained from the EtOAc-soluble part of the tannin-depleted ethanol extract).



UPLC analyses were performed on a Waters Acquity UPLC™ system (H-class) equipped with a binary solvent manager, a sample manager, a column manager, a PDA detector, and an evaporative light scattering detector (ELSD). The stationary phase was a Waters Acquity UPLC BEH Phenyl column (1.7 μ m, 2.1 $\times$ 100 mm) and data were analyzed with Waters Empower. The mobile phase consisted of a MeCN/H₂O gradient (0' 40%/60%, 5' 65%/35%, 5.1' 98%/2%, 7.9' 98%/2%, 8' 40%/60%). Conditions: Temperature 40 C°; Flow rate 0.4 mL/min; Injection volume 1 μ L; detected wavelengths 254, 280, 325 nm and full range scan 190-400 nm.

Fig. 3S Chemical structures of isolated (**1-8**) and identified (**9-13**) triterpene saponins from *B. africana* bark.



- S₁ -β-D-Glu(2→1)-β-D-Xyl
 S₂ -β-D-Glu-[(2→1)-β-D-Xyl]-(4→1)-α-L-Rha
 S₃ -β-D-Glu(2→1)-β-D-Glu
 S₄ -β-D-Xyl(2→1)-β-D-Xyl(2→1)-α-L-Rha
 S₅ -β-D-Xyl-[(2→1)-β-D-Xyl(2→1)-α-L-Rha]-(4→1)-α-L-Rha

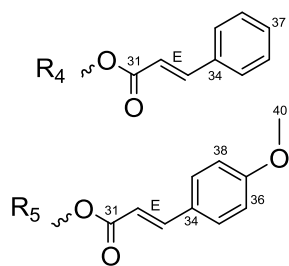
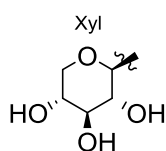
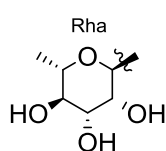
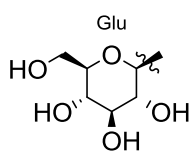
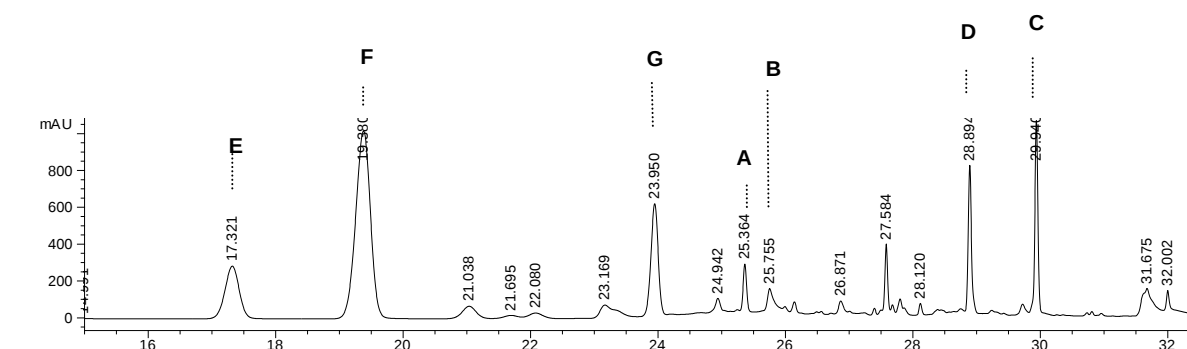


Fig. 4S HPLC analysis of the *Ruta graveolens* herb extract (no. 120) at 210 nm.



HPLC analyses were performed. HPLC parameters: data were obtained on an Agilent 1100 system, equipped with a photodiode array detector and autosampler. The LC was fitted with a Zorbax SB C-18 column, 150 × 4.6 mm i.d., 3.5 µm particle size (Agilent). HPLC method: column temperature 45°C, a flow rate of 1.0 mL/min, injection volume 10 µL. The mobile phases consisted of A: water bidest. and B: acetonitrile (gradient grade; Merck); composition: start 20% B; 20 min 30% B; 30 min 98% B; stop 40 min. The photodiode array detector was set to detection at 210, 230, 275, and 320 nm).

Fig. 5S Chemical structures of main constituents from *Ruta graveolens* herb extract.

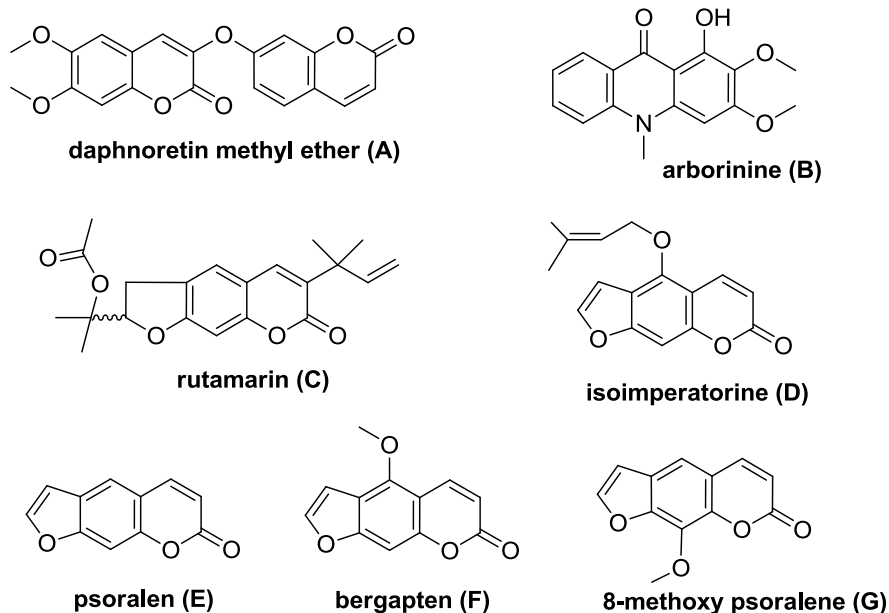
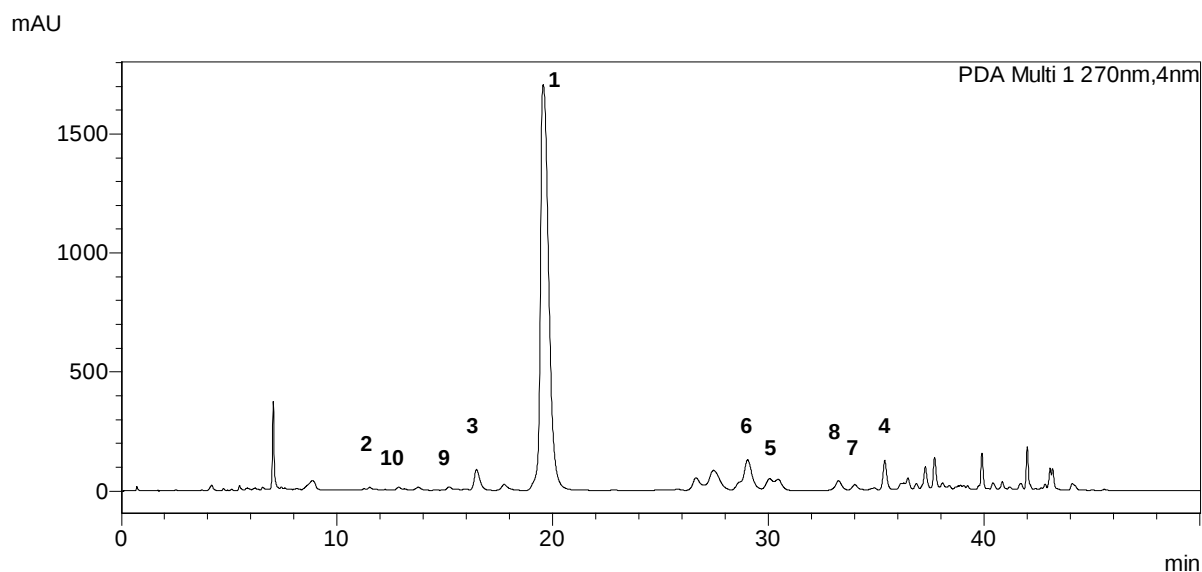


Fig. 6S HPLC analysis of the *Piper nigrum* fruit extract (no. 100).



HPLC was performed on a Shimadzu UFLC-XR instrument (Shimadzu) with a photodiode array (PDA) detector. LC-parameters: stationary phase: Phenomenex (Phenomenex) HyperClone, 150 × 4.60 mm, 5 µm; temperature: 35°C; mobile phase: water (A); methanol (B); flow rate 1.0 mL/min; UV detection wavelength: 270 nm; injection volume: 10 µL; gradient: 85% A, 15% B; 5 min; 45% A, 55% B; 30 min; 32% A, 68% B; 41 min; 2% A, 98% B; 50 min; 2% A, 98% B.

Fig. 7S Chemical structures of main constituents from *Piper nigrum* fruit extract.

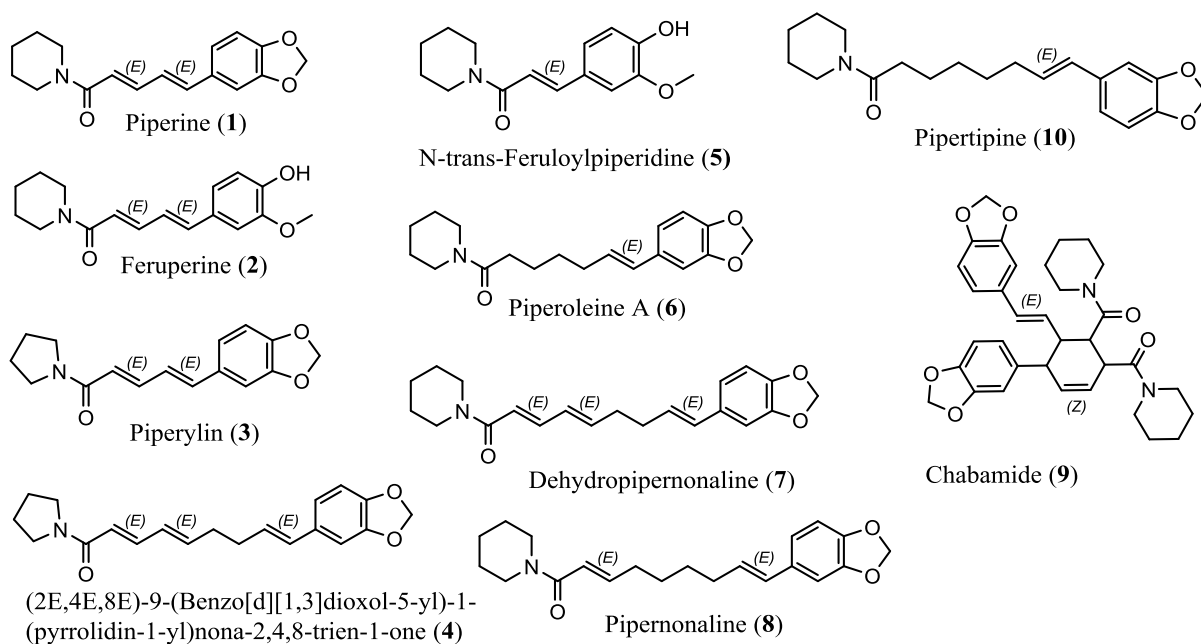
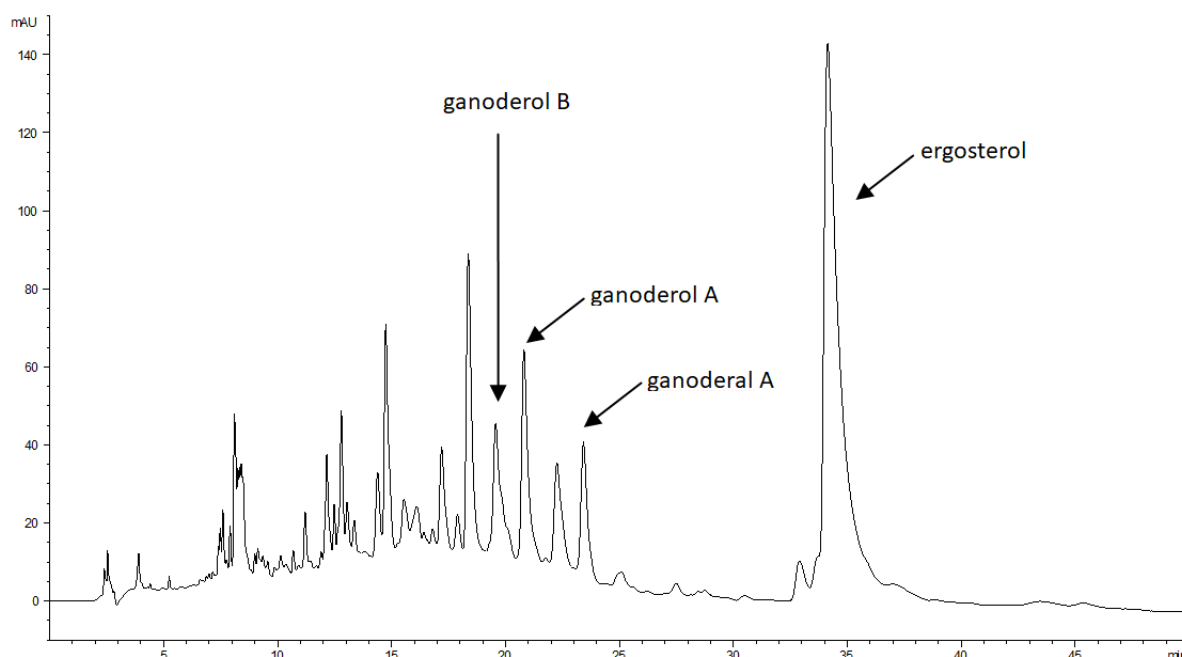


Fig. 8S HPLC analysis of the *Ganoderma lucidum* Karst. fruit body extract (no. 53).



HPLC was performed on an Agilent 1090 device coupled to a diode array (DAD) detector. LC parameters: stationary phase: Phenomenex® HyperClone ODS (C18) 120A, 5 μ m, 150 $\times$ 4.60 mm; temperature: 40°C; mobile phase: A = H₂O + 0.9% acetic acid + 0.1% formic acid, B = acetonitrile; flow rate 1.0 mL/min; DAD detection wavelength: 252 nm; injection volume: 10 μ L; Separations were performed by gradient elution (90/10 A/B in 10 min to 15/85 A/B, then within 20 min to /98 A/B), followed by a 10-min column wash (2A/98B) and a reequilibration period of 10 min. All chemicals and solvents used were analytical grade.

Fig. 9S Chemical structures of identified lanostane triterpenes from *G. lucidum* fruit body.

