

## Supplementary data

**Table S1.** Ontologies/pathogens, diseases, medicinal plants and chemical compounds used in experiment.

Traits	ATOL*, AHOL**, OPL***, IPNI****, and ChEBI***** References
<b>Parasite load traits</b>	
Parasite Oocysts (OPG)	Oocyst Stage
<b>Parasite used</b>	
<i>Eimeria</i> spp.	AHOL_0004070
<b>Disease description</b>	
Coccidiosis	AHOL_0005374
<b>Medicinal plants used</b>	
<i>Artemisia absinthium</i> L.	300106-2
<i>Allium sativum</i> L.	528796-1
<i>Coriandrum sativum</i> L.	840760-1
<i>Calendula officinalis</i> L.	187894-1
<i>Cucurbita pepo</i> L.	292416-1
<i>Satureja hortensis</i> L.	457680-1
<b>Chemical compounds detected</b>	
Polyphenols (µg/mL)	26195
Sterols (µg/mL)	15889
Tocopherols (ng/mL)	135821
Sesquiterpene lactones (ng/ml)	37667
Methoxylated flavones (ng/mL)	25241
Sulfoxide (µg/mL)	22093

\*Traits in reference to the ontology ATOL: <https://www.atol-o.com/en/atol-2/>; \*\*Traits in reference to the ontology AHOL: <https://www.atol-ontology.com/ahol/>; \*\*\* Ontology for Parasite Life cycle: [http://wiki.aiisc.ai/index.php/Ontology\\_for\\_Parasite\\_Life\\_Cycle](http://wiki.aiisc.ai/index.php/Ontology_for_Parasite_Life_Cycle); \*\*\*\* International Plant Names Index-IPNI : <https://www.ipni.org/p/3/>; \*\*\*\*\* Chemical Entities of Biological Interest-ChEBI: <https://www.ebi.ac.uk/chebi/>.

**Table S2.** The LC/MS analysis of chemical compounds in alcoholic plant extracts (10%) (Băieş et al., 2022) [27])

Chemical class	Chemical compound	Plant species and plant part used for extract preparation and the results of LC-MS analysis					
		<i>Allium sativum</i> L.	<i>Artemisia absinthium</i> L.	<i>Coriandrum sativum</i> L.	<i>Cucurbita pepo</i> L.	<i>Calendula officinalis</i> L.	<i>Satureja hortensis</i> L.
		bulb	aerial part	fruit	seed	aerial part	aerial part
Polyphenols (µg/mL)	Chlorogenic acid	-	107.15	4.177	-	220.767	<LOQ
	Caffeic acid	1.221	-	-	-	-	<LOQ
	<i>p</i> -coumaric acid	-	0.621	0.501	-	-	1.464
	Ferulic acid	0.456	0.759	0.759	-	-	0.557
	Sinapic acid	0.228	-	-	-	-	-
	Vitexin	-	1.631	-	-	-	-
	Isoquercitrin	-	56.754	-	-	38.877	6.515
	Rutoside	-	3.826	<LOQ	-	18.819	<LOQ
	Quercitrin	-	1.113	-	-	<LOQ	0.365
	Quercetol	-	6.285	-	-	-	0.394
	Luteolin	-	1.159	-	-	-	6.621
	Kaempferol	-	3.666	-	-	-	-
	Apigenin	-	0.481	-	-	-	2.442
	Syringic acid	-	1.85	0.09	-	1.51	2.28
	Protocatechuic acid	-	1.32	-	-	0.67	0.95
	Vanillic acid	-	1.98	0.94	-	0.44	0.65
Tocopherols (ng/mL)	α-tocopherol	36.1	50.0	-	-	61.6	86.8
	γ-tocopherol	-	23.8	-	446.0	248.9	89.0
	Δ-tocopherol	-	5.0	-	23.2	9.3	13.2
Sterols (µg/mL)	Ergosterol	-	0.344	0.584	-	0.500	1.420
	Stigmasterol	-	34.831	9.675	22.024	72.888	14.215
	B-sitosterol	-	140.985	31.548	5.355	241.997	313.315
	Campesterol	-	3.329	1.780	0.358	1.635	6.140
Methoxylated flavones (ng/mL)	Jaceosidin	-	-	-	-	-	8820.76
	Hispidulin	-	3047.92	-	-	-	2483.00
	Eupatorin	-	976.53	-	-	-	-
	Casticin	-	15384.14	-	-	-	-
	Acacetin	-	-	-	-	-	12691.97
Sesquiterpene lactones (ng/ml)	α-santonin	-	450.52	-	-	-	-
	Vulgarin	-	6499.39	-	-	-	-
Sulfoxide (µg/mL)	Aliin	14.726	-	-	-	-	-

LC/MS—high performance liquid chromatography coupled with mass spectrometry; “-” —Not found; <LOQ—identified based on MS spectra but not determined quantitatively, below limit of quantification.

**Table S3.** The percentage of sporulated oocysts (mean  $\pm$ SDM) from the experimental groups and controls.

Time (hours)	PD	E 35	AS 5	AA 5	CS 5	CP 5	SH 5	CO 5
72	57.6 $\pm$ 2.97 <sup>a</sup>	3.8 $\pm$ 0.92 <sup>b</sup>	2.6 $\pm$ 0.77 <sup>b</sup>	2.6 $\pm$ 0.76 <sup>b</sup>	4 $\pm$ 0.84 <sup>b</sup>	2.6 $\pm$ 0.62 <sup>b</sup>	3.4 $\pm$ 0.57 <sup>b</sup>	1.6 $\pm$ 0.19 <sup>b</sup>
96	67.4 $\pm$ 5.22 <sup>a</sup>	6.6 $\pm$ 0.81 <sup>b</sup>	4.2 $\pm$ 0.75 <sup>bc</sup>	5 $\pm$ 0.79 <sup>bc</sup>	5.4 $\pm$ 0.68 <sup>bc</sup>	4.8 $\pm$ 0.45 <sup>bc</sup>	5.2 $\pm$ 0.32 <sup>bc</sup>	3.6 $\pm$ 0.3 <sup>c</sup>
	PD	E 17.5	AS 2.5	AA 2.5	CS 2.5	CP 2.5	SH 2.5	CO 2.5
72	57.6 $\pm$ 2.97 <sup>a</sup>	5.4 $\pm$ 1.63 <sup>b</sup>	5 $\pm$ 0.91 <sup>b</sup>	4.8 $\pm$ 0.82 <sup>b</sup>	6.8 $\pm$ 0.66 <sup>b</sup>	6.2 $\pm$ 0.89 <sup>b</sup>	5.8 $\pm$ 0.32 <sup>b</sup>	4.2 $\pm$ 0.46 <sup>b</sup>
96	67.4 $\pm$ 5.22 <sup>a</sup>	8 $\pm$ 0.71 <sup>b</sup>	7.4 $\pm$ 0.66 <sup>b</sup>	7 $\pm$ 0.61 <sup>b</sup>	8.6 $\pm$ 0.81 <sup>b</sup>	7.4 $\pm$ 0.47 <sup>b</sup>	8.2 $\pm$ 0.32 <sup>b</sup>	6 $\pm$ 0.83 <sup>b</sup>
	PD	E 8.75	AS 1.25	AA 1.25	CS 1.25	CP 1.25	SH 1.25	CO 1.25
72	57.6 $\pm$ 2.97 <sup>a</sup>	9.6 $\pm$ 2.67 <sup>b</sup>	8.6 $\pm$ 0.88 <sup>b</sup>	7.4 $\pm$ 1.15 <sup>b</sup>	10.4 $\pm$ 0.81 <sup>b</sup>	9.4 $\pm$ 0.74 <sup>b</sup>	9.8 $\pm$ 0.49 <sup>b</sup>	7.8 $\pm$ 0.3 <sup>b</sup>
96	67.4 $\pm$ 5.22 <sup>a</sup>	13 $\pm$ 2.18 <sup>bc</sup>	12 $\pm$ 1.08 <sup>bc</sup>	9.4 $\pm$ 1.15 <sup>c</sup>	13 $\pm$ 0.71 <sup>bc</sup>	13 $\pm$ 0.73 <sup>bc</sup>	15 $\pm$ 0.61 <sup>b</sup>	10.8 $\pm$ 0.46 <sup>c</sup>
	PD	E 4.375	AS 0.625	AA 0.625	CS 0.625	CP 0.625	SH 0.625	CO 0.625
72	57.6 $\pm$ 2.97 <sup>a</sup>	19.4 $\pm$ 1.91 <sup>b</sup>	15.2 $\pm$ 1.5 <sup>bc</sup>	12.4 $\pm$ 1.6 <sup>c</sup>	16.4 $\pm$ 0.51 <sup>bc</sup>	16.2 $\pm$ 0.78 <sup>bc</sup>	16 $\pm$ 0.6 <sup>bc</sup>	13.8 $\pm$ 0.92 <sup>bc</sup>
96	67.4 $\pm$ 5.22 <sup>a</sup>	22.6 $\pm$ 1.29 <sup>b</sup>	17.8 $\pm$ 2.78 <sup>b</sup>	15.4 $\pm$ 1.15 <sup>b</sup>	19.4 $\pm$ 1.21 <sup>b</sup>	18.8 $\pm$ 1.42 <sup>b</sup>	19 $\pm$ 1.19 <sup>b</sup>	16.8 $\pm$ 1.38 <sup>b</sup>
	PD	E 2.187	AS 0.312	AA 0.312	CS 0.312	CP 0.312	SH 0.312	CO 0.312
72	57.6 $\pm$ 2.97 <sup>a</sup>	36.4 $\pm$ 2.21 <sup>b</sup>	22.8 $\pm$ 2.14 <sup>c</sup>	22.7 $\pm$ 1.75 <sup>c</sup>	24.8 $\pm$ 0.66 <sup>c</sup>	23.8 $\pm$ 1.2 <sup>c</sup>	24.2 $\pm$ 1.35 <sup>c</sup>	21.6 $\pm$ 1.02 <sup>c</sup>
96	67.4 $\pm$ 5.22 <sup>a</sup>	42.2 $\pm$ 1.83 <sup>b</sup>	27.6 $\pm$ 2.26 <sup>c</sup>	26.6 $\pm$ 1.35 <sup>c</sup>	29.2 $\pm$ 0.86 <sup>c</sup>	29 $\pm$ 1.04 <sup>c</sup>	29.3 $\pm$ 0.73 <sup>c</sup>	26.2 $\pm$ 1.1 <sup>c</sup>

SDM-standard deviation of mean, E (ethanol), PD (potassium dichromate), AS (*A. sativum*), AA (*A. absinthium*), CP (*C. pepo*), CS (*C. sativum*), SH (*S. hortensis*), CO (*C. officinalis*). Values with no common superscript in a column within an experiment were significantly different ( $p \leq 0.05$ ).

**Table S4.** The percentage of destroyed oocysts (mean  $\pm$ SDM) from the experimental groups and controls.

Time (hours)	PD	E 35	AS 5	AA 5	CS 5	CP 5	SH 5	CO 5
24	6 $\pm$ 3.39 <sup>d</sup>	30.2 $\pm$ 2.31 <sup>c</sup>	41.8 $\pm$ 2.29 <sup>ab</sup>	36.8 $\pm$ 1.85 <sup>bc</sup>	43.2 $\pm$ 1.77 <sup>ab</sup>	41.2 $\pm$ 1.3 <sup>ab</sup>	40.8 $\pm$ 1.05 <sup>ab</sup>	43.6 $\pm$ 1.13 <sup>a</sup>
48	5.8 $\pm$ 1.3 <sup>c</sup>	38.4 $\pm$ 2.58 <sup>b</sup>	48.6 $\pm$ 2.96 <sup>ab</sup>	43 $\pm$ 2.98 <sup>ab</sup>	49.6 $\pm$ 1.86 <sup>ab</sup>	46.6 $\pm$ 1.25 <sup>ab</sup>	47.8 $\pm$ 1.45 <sup>ab</sup>	49.8 $\pm$ 1.45 <sup>a</sup>
72	5.8 $\pm$ 1.48 <sup>d</sup>	43 $\pm$ 3.2 <sup>c</sup>	56.6 $\pm$ 2.9 <sup>ab</sup>	50.6 $\pm$ 2.8 <sup>bc</sup>	56.8 $\pm$ 1.39 <sup>ab</sup>	55.6 $\pm$ 1.57 <sup>ab</sup>	54.8 $\pm$ 1.15 <sup>ab</sup>	58.8 $\pm$ 1.19 <sup>a</sup>
96	5 $\pm$ 2.55 <sup>c</sup>	46.2 $\pm$ 4.51 <sup>b</sup>	62.2 $\pm$ 2.87 <sup>a</sup>	59.2 $\pm$ 2.7 <sup>a</sup>	63.2 $\pm$ 1.59 <sup>a</sup>	60.2 $\pm$ 1.27 <sup>a</sup>	59.6 $\pm$ 1.09 <sup>a</sup>	65.2 $\pm$ 1.16 <sup>a</sup>
	PD	E 17.5	AS 2.5	AA 2.5	CS 2.5	CP 2.5	SH 2.5	CO 2.5
24	6 $\pm$ 3.39 <sup>c</sup>	21.8 $\pm$ 4.22 <sup>bc</sup>	34.6 $\pm$ 3.07 <sup>ab</sup>	34.6 $\pm$ 2.11 <sup>a</sup>	36.8 $\pm$ 1.77 <sup>a</sup>	34 $\pm$ 1.91 <sup>a</sup>	33.2 $\pm$ 1.32 <sup>ab</sup>	36.6 $\pm$ 1.59 <sup>a</sup>
48	5.8 $\pm$ 1.3 <sup>c</sup>	30.6 $\pm$ 3.92 <sup>b</sup>	41.2 $\pm$ 3.73 <sup>ab</sup>	47.2 $\pm$ 2.88 <sup>a</sup>	43.8 $\pm$ 2.44 <sup>ab</sup>	39.6 $\pm$ 1.77 <sup>ab</sup>	40 $\pm$ 1.53 <sup>ab</sup>	43.2 $\pm$ 2.11 <sup>ab</sup>
72	5.8 $\pm$ 1.48 <sup>c</sup>	30.2 $\pm$ 3.05 <sup>b</sup>	48.4 $\pm$ 3.33 <sup>a</sup>	52.8 $\pm$ 2.3 <sup>a</sup>	48.2 $\pm$ 2.67 <sup>a</sup>	45.8 $\pm$ 0.93 <sup>a</sup>	46.2 $\pm$ 1.35 <sup>a</sup>	51 $\pm$ 2.34 <sup>a</sup>
96	5 $\pm$ 2.55 <sup>c</sup>	34.8 $\pm$ 4.01 <sup>b</sup>	52.4 $\pm$ 2.03 <sup>a</sup>	57.2 $\pm$ 1.82 <sup>a</sup>	53.4 $\pm$ 1.44 <sup>a</sup>	50.8 $\pm$ 1.06 <sup>a</sup>	50.8 $\pm$ 1.27 <sup>a</sup>	56.2 $\pm$ 1.18 <sup>a</sup>
	PD	E 8.75	AS 1.25	AA 1.25	CS 1.25	CP 1.25	SH 1.25	CO 1.25
24	6 $\pm$ 3.39 <sup>b</sup>	20.8 $\pm$ 2.62 <sup>ab</sup>	26 $\pm$ 3.98 <sup>a</sup>	28.4 $\pm$ 1.68 <sup>a</sup>	28.6 $\pm$ 2.2 <sup>a</sup>	25 $\pm$ 2.24 <sup>a</sup>	24.6 $\pm$ 1.92 <sup>a</sup>	27.8 $\pm$ 1.86 <sup>a</sup>
48	5.8 $\pm$ 1.3 <sup>b</sup>	28.8 $\pm$ 4.45 <sup>ab</sup>	33.2 $\pm$ 4.39 <sup>a</sup>	34.6 $\pm$ 3.98 <sup>a</sup>	35.4 $\pm$ 2.23 <sup>a</sup>	32.2 $\pm$ 2.6 <sup>a</sup>	32 $\pm$ 2.34 <sup>a</sup>	35.4 $\pm$ 1.76 <sup>a</sup>
72	5.8 $\pm$ 1.48 <sup>b</sup>	30.4 $\pm$ 4.73 <sup>a</sup>	38.8 $\pm$ 3.94 <sup>a</sup>	39 $\pm$ 3.38 <sup>a</sup>	39.2 $\pm$ 2.22 <sup>a</sup>	36.2 $\pm$ 1.94 <sup>a</sup>	35.2 $\pm$ 1.76 <sup>a</sup>	41 $\pm$ 2.49 <sup>a</sup>
96	5 $\pm$ 2.55 <sup>b</sup>	35.6 $\pm$ 4.11 <sup>a</sup>	43 $\pm$ 3.58 <sup>a</sup>	43 $\pm$ 3.56 <sup>a</sup>	45.4 $\pm$ 1.69 <sup>a</sup>	42.6 $\pm$ 1.21 <sup>a</sup>	42.4 $\pm$ 1.21 <sup>a</sup>	46.8 $\pm$ 2.18 <sup>a</sup>
	PD	E 4.375	AS 0.625	AA 0.625	CS 0.625	CP 0.625	SH 0.625	CO 0.625
24	6 $\pm$ 3.39 <sup>b</sup>	17.6 $\pm$ 3.27 <sup>ab</sup>	21.6 $\pm$ 2.79 <sup>a</sup>	24.6 $\pm$ 2.19 <sup>a</sup>	25 $\pm$ 1.38 <sup>a</sup>	20.8 $\pm$ 1.4 <sup>a</sup>	20.4 $\pm$ 1.09 <sup>a</sup>	24 $\pm$ 1.2 <sup>a</sup>
48	5.8 $\pm$ 1.3 <sup>b</sup>	23 $\pm$ 1.93 <sup>a</sup>	25.6 $\pm$ 1.56 <sup>a</sup>	33 $\pm$ 1.8 <sup>a</sup>	31.2 $\pm$ 1.8 <sup>a</sup>	26.4 $\pm$ 1.57 <sup>a</sup>	26 $\pm$ 1.25 <sup>a</sup>	30.6 $\pm$ 1.63 <sup>a</sup>
72	5.8 $\pm$ 1.48 <sup>c</sup>	25.4 $\pm$ 3.63 <sup>ab</sup>	28.8 $\pm$ 1.8 <sup>ab</sup>	36.2 $\pm$ 1.64 <sup>b</sup>	29.8 $\pm$ 1.28 <sup>ab</sup>	26.8 $\pm$ 1.57 <sup>a</sup>	28.8 $\pm$ 2.35 <sup>ab</sup>	32 $\pm$ 1.32 <sup>ab</sup>
96	5 $\pm$ 2.55 <sup>c</sup>	28 $\pm$ 3.08 <sup>b</sup>	31 $\pm$ 2.27 <sup>ab</sup>	38.8 $\pm$ 1.51 <sup>a</sup>	32.4 $\pm$ 1.81 <sup>ab</sup>	28.8 $\pm$ 1.81 <sup>b</sup>	29.6 $\pm$ 0.91 <sup>b</sup>	33.6 $\pm$ 1.22 <sup>ab</sup>
	PD	E 2.187	AS 0.312	AA 0.312	CS 0.312	CP 0.312	SH 0.312	CO 0.312
24	6 $\pm$ 3.39 <sup>b</sup>	14.4 $\pm$ 2.53 <sup>ab</sup>	16.6 $\pm$ 2.6 <sup>ab</sup>	24 $\pm$ 3.06 <sup>a</sup>	19 $\pm$ 1.05 <sup>ab</sup>	15.6 $\pm$ 1.25 <sup>b</sup>	15.8 $\pm$ 1.24 <sup>b</sup>	18.6 $\pm$ 1.24 <sup>ab</sup>
48	5.8 $\pm$ 1.3 <sup>c</sup>	17.8 $\pm$ 1.36 <sup>bc</sup>	20.8 $\pm$ 3.2 <sup>ab</sup>	30 $\pm$ 2.94 <sup>a</sup>	23.2 $\pm$ 1.59 <sup>ab</sup>	19.4 $\pm$ 1.4 <sup>bc</sup>	19.6 $\pm$ 1.38 <sup>bc</sup>	23.2 $\pm$ 1.18 <sup>ab</sup>
72	5.8 $\pm$ 1.48 <sup>c</sup>	20.6 $\pm$ 2.38 <sup>bc</sup>	23.4 $\pm$ 2.7 <sup>bc</sup>	32.4 $\pm$ 2.73 <sup>b</sup>	22.2 $\pm$ 1.56 <sup>bc</sup>	21.2 $\pm$ 1.2 <sup>ac</sup>	21.2 $\pm$ 1.57 <sup>ac</sup>	26 $\pm$ 2.51 <sup>ab</sup>
96	5 $\pm$ 2.55 <sup>c</sup>	21.2 $\pm$ 1.76 <sup>b</sup>	25.2 $\pm$ 2.49 <sup>b</sup>	34.8 $\pm$ 2.63 <sup>a</sup>	22.8 $\pm$ 1.07 <sup>b</sup>	23 $\pm$ 1.82 <sup>b</sup>	22 $\pm$ 0.89 <sup>b</sup>	25.8 $\pm$ 1.33 <sup>b</sup>

SDM-standard deviation of mean, E (ethanol), PD (potassium dichromate), AS (*A. sativum*), AA (*A. absinthium*), CP (*C. pepo*), CS (*C. sativum*), SH (*S. hortensis*), CO (*C. officinalis*). Values with no common superscript in a column within an experiment were significantly different ( $p \leq 0.05$ ).