

Supplementary Material

Unveiling the bioactivity potential of *Allium triquetrum* L. lipophilic fraction: chemical characterization and *in vitro* antibacterial effect against methicillin-resistant *Staphylococcus aureus*

Samia Rabah¹, Kahina Kouachi^{2,3}, Patrícia A. B. Ramos^{4,5}, Ana Peixoto Gomes⁶, Adelaide Almeida⁶, Hayate Haddadi-Guemghar¹, Madani Khodir^{1,7}, Armando J. D. Silvestre⁴, Sónia A. O. Santos^{4*}

¹Laboratoire de Biomathématiques, Biophysique Biochimie et de Scientométrie, Faculté des Sciences de la Nature et de la Vie, Université de Bejaia, 06000 Bejaia, Algérie

²Faculté des Sciences de la Nature et de la Vie, Département des Troncs Communs, Université de Bejaia, 06000 Bejaia, Algérie

³Laboratoire de Physico-Chimie des Matériaux et Catalyse, Faculté des sciences Exactes, Université de Bejaia, 06000 Bejaia, Algérie

⁴CICECO - Aveiro Institute of Materials and Department of Chemistry, University of Aveiro, 3810-193 Aveiro, Portugal

⁵QOPNA & LAQV-REQUIMTE, Department of Chemistry, University of Aveiro, 3810-193 Aveiro, Portugal

⁶Department of Biology and CESAM, University of Aveiro, 3810-193 Aveiro, Portugal.

⁷Centre de recherche en technologie agro-alimentaire, Route de Targua-ouzemour, 06000 Bejaia, Algérie

*corresponding author: santos.sonia@ua.pt

Table S1: Composition (mg g⁻¹ of extract) of *A. triquetrum* L. bulbs, flowers and leaves lipophilic extracts.^a

RT (min)	Compound	Bulbs	Flowers	Leaves
Fatty acids		115.50	91.28	68.48
<i>Saturated fatty acids</i>		51.35	30.19	22.63
25.44	Dodecanoic acid	0.21	0.20	0.76
30.83	Tetradecanoic acid	0.89	0.70	1.94
33.34	Pentadecanoic acid	0.46	0.19	0.18
35.74	Hexadecanoic acid	32.70	16.50	11.23
38.03	Heptadecanoic acid	0.35	0.23	0.09
40.24	Octadecanoic acid	5.16	4.12	2.04
44.40	Eicosanoic acid	1.51	3.00	0.89
46.37	Heneicosanoic acid	0.13	0.16	0.14
48.26	Docosanoic acid	3.21	1.39	0.78
50.09	Tricosanoic acid	1.03	-	-
51.93	Tetracosanoic acid	2.61	1.24	0.99
53.91	Pentacosanoic acid	0.32	-	-
55.98	Hexacosanoic acid	0.68	0.38	0.48
60.41	Octacosanoic acid	0.71	1.11	2.41
65.30	Triacontanoic acid	1.39	0.97	0.71
<i>Unsaturated fatty acids</i>		64.15	61.07	45.79
35.02	(9Z)-Hexadeca-9-enoic acid	0.55	0.11	0.06
35.11	(9E)-Hexadeca-9-enoic acid	0.83	0.21	0.05
35.4	Hexadecenoic acid isomer	0.14	0.14	0.14

39.35	(9Z,12Z)-Octadeca-9,12-dienoic acid	34.90	31.78	18.13
39.44	(9Z,12Z,15Z)-Octadeca-9,12,15-trienoic acid	-	17.88	22.61
39.55	(9Z)-Octadeca-9-enoic acid	25.71	9.43	3.93
39.70	(9E)-Octadeca-9-enoic acid	2.02	1.28	0.73
39.94	Octadecenoic acid isomer	-	0.24	0.12
	<i>Hydroxy fatty acids</i>	-	0.02	0.06
12.05	4-Hydroxybutanoic acid	-	0.02	0.06
Long chain aliphatic alcohols		10.33	12.42	26.84
33.9	Hexadecan-1-ol	0.30	0.07	-
38.53	Octadecan-1-ol	0.29	0.04	-
46.74	Docosan-1-ol	0.37	0.09	-
50.41	Tetracosan-1-ol	0.83	0.29	0.30
54.26	Hexacosan-1-ol	1.03	0.55	0.82
58.51	Octacosan-1-ol	2.49	8.04	21.34
63.08	Triacontan-1-ol	1.43	3.32	3.74
68.87	Dotriacontan-1-ol	3.58	-	0.65
Long chain aliphatic alkanes		26.19	39.81	4.36
37.10	Heneicosane	-	0.93	-
41.55	Tricosane	0.85	3.71	0.13
45.65	Pentacosane	7.94	3.18	0.34
49.45	Heptacosane	2.90	6.81	0.50
53.23	Nonacosane	4.37	13.35	1.03
57.44	Hentriacontane	10.13	11.83	2.37
Long chain aliphatic aldehydes		1.06	3.26	8.50

51.60	Hexacosanal	0.45	-	-
55.70	Octacosanal	0.61	2.34	7.08
60.21	Triacontanal	-	0.92	1.42
Long chain aliphatic ketone		7.46	81.02	25.35
61.24	Hentricontan-16-one	7.46	81.02	25.35
Monoglycerides		11.01	2.46	8.58
47.59	2,3-Dihydroxypropyl hexadecanoate	3.41	1.02	0.91
50.51	2,3-Dihydroxypropyl (9Z,12Z)-9,12-octadecadienoate	1.77	0.66	1.62
50.62	2,3-Dihydroxypropyl (9Z)-9-octadecenoate	1.91	0.78	2.60
59.35	2,3-Dihydroxypropyl docosanoate	2.45	-	-
64.99	2,3-Dihydroxypropyl tetracosanoate	1.48	-	3.44
Sterols		11.16	6.39	7.06
58.17	Cholesterol	-	0.60	0.37
60.54	Campesterol	1.36	0.51	0.19
62.63	β -Sitosterol	8.09	3.93	2.98
62.90	β -Sitostanol	1.70	1.35	3.51
Aromatic compound		3.10	1.70	4.24
20.94	Vanillin	0.19	-	0.05
21.47	Cinnamic acid	0.17	0.13	0.25
22.98	Tyrosol	2.35	0.78	2.64
24.55	4-Hydroxybenzoic acid	-	0.07	-
28.32	Vanillic Acid	0.20	0.10	0.14
36.45	(<i>E</i>)-ferulic acid	0.19	0.61	1.16

Others		20.74	10.79	10.28
14.17	Glycerol	12.16	10.04	6.31
38.95	Phytol	-	0.26	1.44
58.05	α -Tocopherol	-	0.48	2.53
68.14	1-mono(22-hydroxydocosanoyl)glycerol	8.58	-	-
Total		206.56	249.12	163.67

^aResults are the average of the concordant values obtained (less than 5% variation between injection) for the three samples injected in duplicate.