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Supplementary material

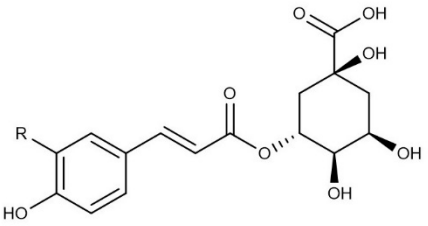
Phytochemical Composition and Cytoprotective Properties of the Endemic *Sideritis sipylea* Boiss Greek Species: A Valorization Study

Silvia Di Giacomo [1], Antonella Di Sotto [1,*], Apostolis Angelis [2], Ester Percaccio [1], Annabella Vitalone [1], Marco Gullì [1], Alberto Macone [3], Evangelos Axiotis [2,4,†] and Alexios Leandros Skaltsounis [2,4,†]

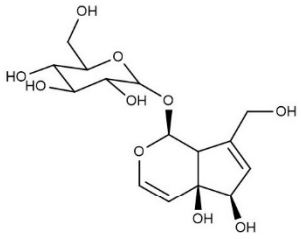
[1] Department of Physiology and Pharmacology "V. Erspamer", Sapienza University of Rome, P.le Aldo Moro 5, 00185 Rome, Italy
[2] Department of Pharmacognosy and Natural Products Chemistry, Faculty of Pharmacy, National and Kapodistrian University of Athens, 15771 Athens, Greece
[3] Department of Biochemical Science "A. Rossi Fanelli", Sapienza University of Rome, P.le Aldo Moro 5, 00185 Rome, Italy
[4] Natural Products Research Center "NatPro Aegean", Gera, 81106 Lesvos, Greece
* Correspondence: antonella.disotto@uniroma1.it
† These authors equally contributed to the work.

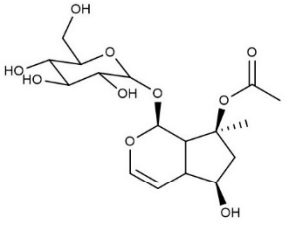
Table S1. *S. sipylea* methanolic enriched extract fractions of increased polarity in mass (g) and their % (w/w) yields.

Fractions	Mass (g)	Yield (% w/w)
DCM 100%	0.0276	0.44
DCM / EtOAc (10%)	0.1636	2.64
DCM / EtOAc (50%)	0.2379	3.84
EtOAc 100%	0.3173	5.12
EtOAc / MeOH (10%) **(S10)**	0.9326	**15.04**
EtOAc / MeOH (20%) **(S20)**	1.5671	**25.27**
EtOAc / MeOH (50%) **(S50)**	1.4511	**23.40**
MeOH 100%	0.2462	3.97



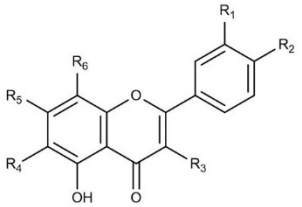
Phenolic acids	R
Feruoylquinic acid (3)	OCH_3
Chlorogenic acid (5)	OH



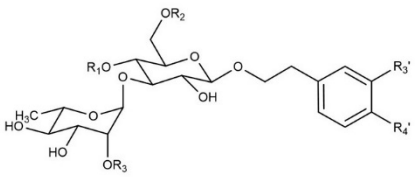


Iridoids
Melittoside derivatives (1),(4)
Ajugoside (6)

1,4 **6**



Flavonoid	R_1	R_2	R_3	R_4	R_5	R_6
Apigenin (17)	H	OH	H	H	OH	H
Apigenin-7-*p*-coumaroyl-glucoside (16)	H	OH	H	H	*p*-coumaroyl-glu	H
Apigenin-7-*O*-glucoside (11)	H	OH	H	H	*O*-glu	H
Isoscutelarein 7-*O*-allosyl-(1→2)-glucoside (12)	H	OH	H	H	*O*-all-glu	OH
Luteolin 7-*O*-allosyl-(1→2)-[6''-*O*-acetyl]-glucoside (13)	OH	OH	H	H	*O*-(6''-*O*-acetyl)-β- glu	H
4'-*O*-methylisoscutellarein 7-*O*-allosyl-(1→2)-glucoside (14)	H	OCH_3	H	H	*O*-all-glu	OH
4'-*O*-methylisoscutellarein 7-*O*-allosyl-(1→2) [6''-*O*-acetyl]-glucoside (15)	H	OCH_3	H	H	*O*-(6''-*O*-acetyl)-β- glu	OH
4′-*O*-methylisoscutellarein 7-*O*-[6'''-*O*-acetyl]-allosyl-(1 → 2)-[6''-*O*-acetyl]-glucoside (18)	H	OCH_3	H	H	*O*-[6'''-*O*-acetyl- β-D-all-(1→2)] 6''- *O*-acetyl-β-*D*-glu]	OH
Xanthomicrol or Hypolaetin trimethyl ether (19)	H	OH	H	OCH_3	OCH_3	OCH_3



Phenylethanoid glycosides	R_1	R_2	R_3	R_3	R_4
Echinacoside (7)	feru	glc	H	OH	OH
Lavandulifolioside (8)	caff.	api	api	OH	OH
Isoverbascoside (9)	H	caff.	H	OH	OH
Leucoseptoside A (10)	feru	H	H	OH	OH

*feru = feruoyl; caff = caffeoyl; glc = glucose; api = apiose

Figure S1. Chemical structures of the identified compounds from S10, S20 and S50 fractions respectively from wild *S. sipylea* Boiss. The numbers in parentheses refer to Table 2 in the main manuscript.

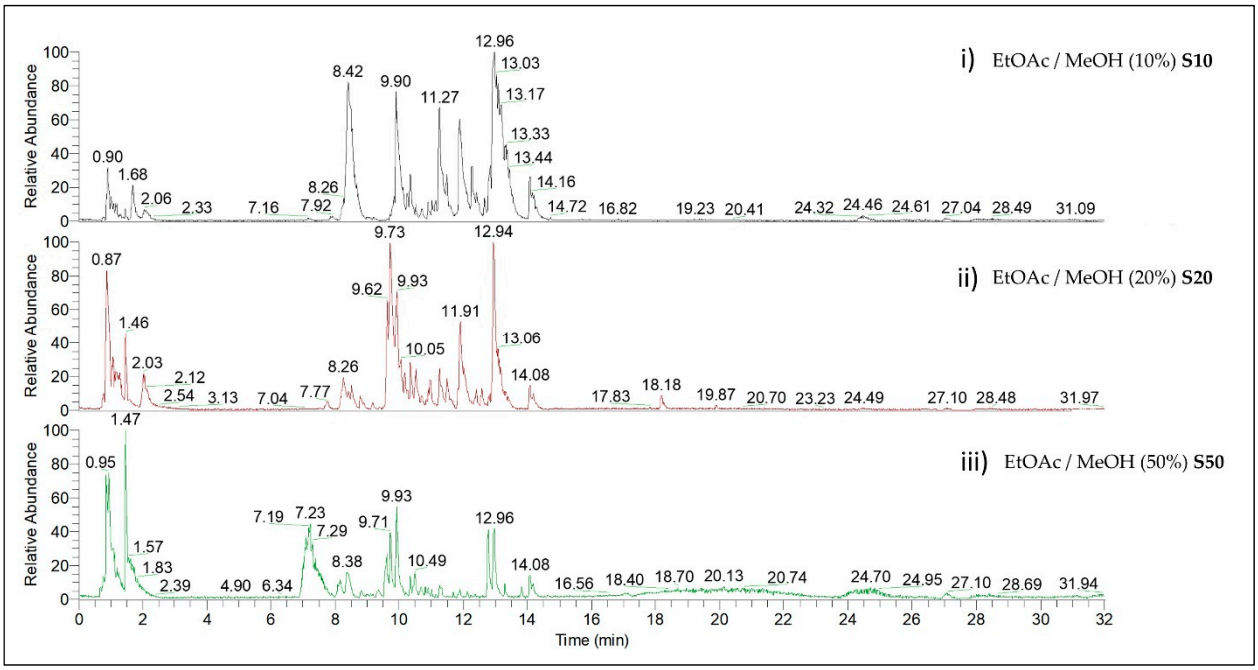


Figure S2. UPLC-ESI (-)-HRMS chromatograms of (i) EtOAc / MeOH (10%) (S10), (ii) EtOAc / MeOH (20%) (S20), and (iii) EtOAc / MeOH (50%) (S50) fractions of the methanol extract from wild *S. sipylea*

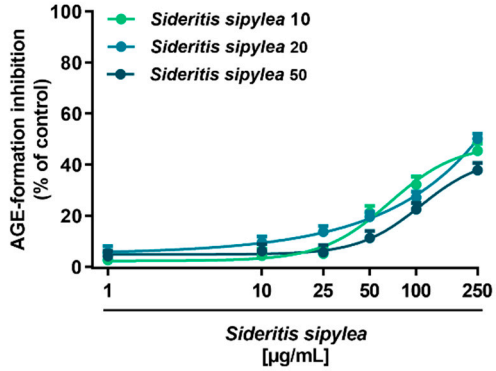


Figure S3. AGE formation inhibition by S10, S20 and S50 fractions from *S. sipylea* Boiss. Data represents the average and standard error of at least six replicates from at least two experiments.