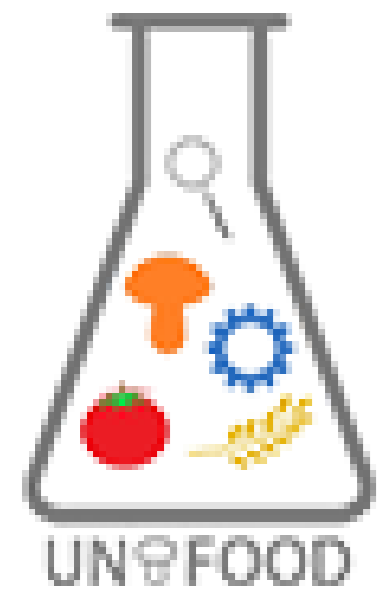


ANTIOXIDANT SCORES COMPARISON OF AVOCADO AND OLIVES

Vanja M. Todorovic^{1*}, Nevena M. Dabetic¹, Milica D. Zrnic Ciric¹, Ivana D. Djuricic¹, Natalija I. Kurmazovic², Sladjana S. Sobajic¹

¹ Faculty of Pharmacy, University of Belgrade, Belgrade, Serbia

² Faculty of Biology, University of Belgrade, Belgrade, Serbia



1 Background

Dietary habits of individuals worldwide appear to be undergoing a transition toward higher consumption of plant foods, especially plant foods rich in bioactive ingredients. This changing pattern involves, among other, the increasing popularity of foods such as avocado and olives, used as a salad, oil, or as a spread. Both olives and avocado are high in calories and have the same macronutrient energy ratio (4:19:77 for protein, carbohydrates and fat, respectively) that makes them interesting as rich sources of beneficial unsaturated fatty acids. Beside macro- and micro-nutrients, olives and avocado contain various phytochemicals, of which polyphenols are the most interesting ones.

5 Conclusion

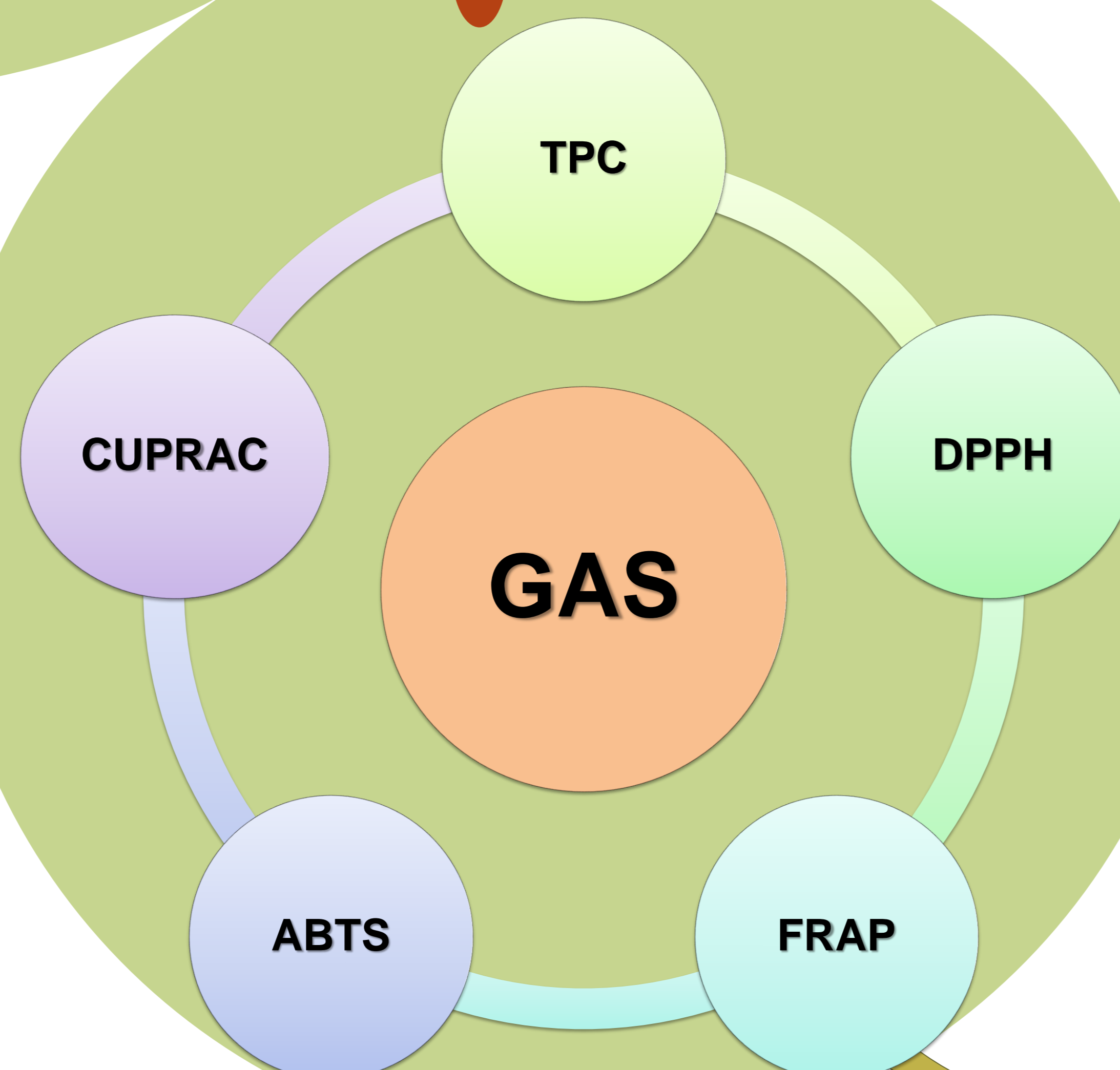
The results of this investigation indicates that the variety was one of the important factors that influenced the type and amount of extracted biomolecules. Although the calculated GAS value for olives was even 12-fold lower on average than that determined for avocados, a statistically significant difference between these foods size was absent due to a very small sample size. Therefore, future experiments should include much more samples in order to confirm these preliminary results.

2 Methods

Total polyphenol content as well as antioxidant activity of avocado (Hass and Fuerte varieties) and olive (Amfissa and Kalamata varieties) fruit extracts were compared. Pitted samples were dried to constant mass, defatted and then extraction was conducted by 70% ethanol using ultrasonic bath. Total phenolic content (TPC) was carried out by Folin-Ciocalteu colorimetric assay. Four different spectrophotometric methods (DPPH·, ABTS·+, FRAP, and CUPRAC) were used for antioxidant capacity assessment.



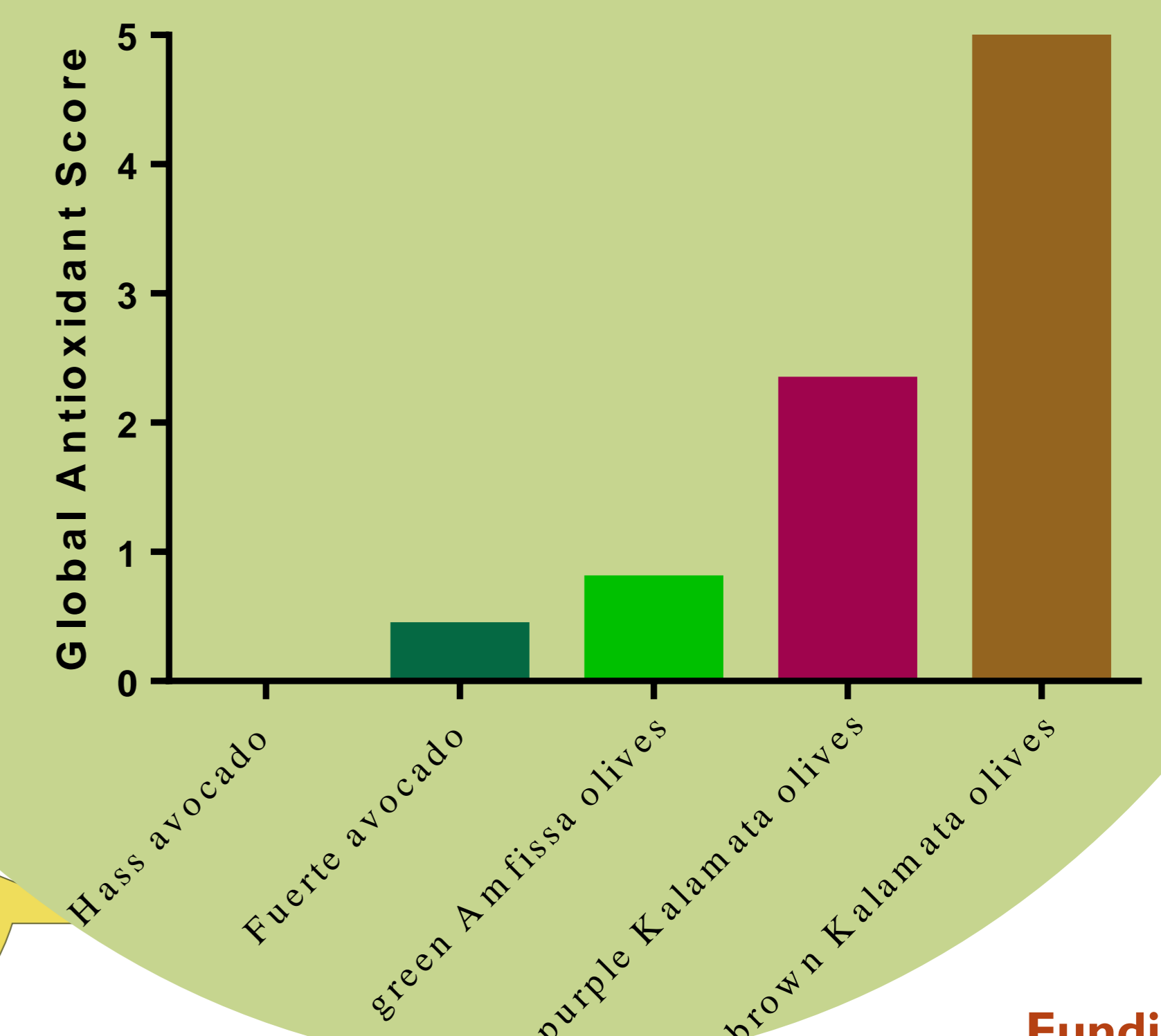
3 Data



4 Results

Table 1. Total polyphenol content and antioxidant activity of fruit extracts, results are shown as mean \pm SD; TPC is expressed as mg GAE/g dried defatted sample; antioxidant activity is expressed as mmol TE/g dried defatted sample

Sample	TPC	DPPH	FRAP	ABTS	CUPRAC
Hass avocado	9.02 \pm 0.16	53 \pm 2	68 \pm 0	64 \pm 2	278 \pm 10
Fuerte avocado green	6.18 \pm 0.23	37 \pm 6	34 \pm 0	45 \pm 1	99 \pm 20
Amfissa olives Purple	12,09 \pm 0.22	120 \pm 13	49 \pm 1	89 \pm 1	351 \pm 14
Kalamata olives Brown	23,80 \pm 0,16	152 \pm 1	159 \pm 1	208 \pm 1	968 \pm 27
Kalamata olives	49,14 \pm 0.45	319 \pm 14	328 \pm 3	386 \pm 0	1542 \pm 76



*Corresponding author:
vanja.todorovic@hotmail.com



Funding Source:

This research was supported by the Ministry of Education, Science and Technological Development of Serbia (451R03R9/2021RI4/200161)