

## Supplementary Material

Influence of plasma isolated anthocyanins and their metabolites on cancer cell migration (HT-29 and Caco-2): Results of the ATTACH study

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**Table S1.** Foodstuffs that were restricted or not allowed during the run-in and 28-day intervention period.

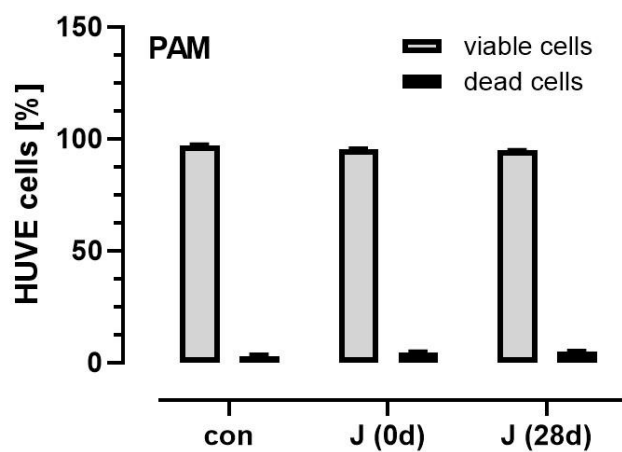
Foodstuffs allowed with <b>minor restrictions</b> <sup>1</sup>	Foodstuffs <b>not allowed</b>
<p><b><u>Milk and milk products:</u></b> milk, yoghurt and other milk products with fruit, nuts (no red fruit).</p> <p><b><u>Vegetables:</u></b> yellow and green paprika, leek, spinach, cauliflower, broccoli, onions (no red onions).</p> <p><b><u>Fruit:</u></b> bananas, pears, white grapes, apples (max. 1 piece/day), peaches, apricots (max. 1 piece/day), kiwis, pineapple.</p> <p><b><u>Breakfast cereals:</u></b> cereals (no wholemeal/ without red fruits/ dark chocolate/ bran).</p> <p><b><u>Fat, spices:</u></b> vegetable fat and oil, paprika spice, chili spice, cayenne pepper, curry spice.</p> <p><b><u>Sweets:</u></b> ice cream with fruits, nuts (without red fruit / dark chocolate), marmalade/ jam/ jelly (without red fruit).</p> <p><b><u>Allowed (per day):</u></b> 1 cup of tea, 1 cup of coffee, 1 glass of ale or glass of white wine (no red wine).</p> <p>Please <b><u>note:</u></b> fruit and vegetable, if possible, have to be peeled before consumption, especially, if consumed more portions a day, forgo red fruits, no consume external leaves of salad, no consume cereal products, listed spice and mixed spices use sparing.</p>	<p><b><u>Fruit:</u></b> blueberries, blackberries, cranberries, strawberries, bilberries, raspberries, currants, lingonberries, cherries, red grapes, pomegranate, plums, watermelon.</p> <p><b><u>Fruit containing foodstuffs:</u></b> red marmalade/ jellies, cake with red fruits, yoghurt with red fruits, ice cream with red fruits, desserts, muesli, muesli bars, cereals with wholemeal, dark chocolate, cocoa powder, gumdrop with fruit.</p> <p><b><u>Vegetables:</u></b> purple potatoes, purple carrots, tomatoes, red and orange peppers, red cabbage, beetroot, radicchio, red radish, rhubarb, red and black pulses (kidney beans, red lentils), eggplant, pumpkin, red onions.</p> <p><b><u>Other:</u></b> tomato sauce, puree, or paste, ketchup, red pesto.</p> <p><b><u>Avoid</u></b> red wine, fruit and vegetable juice, fruit spritzer, smoothies, fruit tea, green tea, coffee, rooibos tea, alcoholic drinks (bear, wine, schnapps, and liqueur).</p> <p>Please <b><u>note:</u></b> anthocyanins may be food additives listed as number E 163.</p>

<sup>1</sup>Foodstuffs were categorized according to their anthocyanin content based on data using the USDA database for the Flavonoid Content of Selected Foods (Release 3.3 (2018); <http://www.ars.usda.gov/>) or the database on polyphenol contents in food (Polyphenol-Explorer, Release 3.0 (<http://www.phenol-explorer.eu/compounds>))

**Table S2.** Baseline characteristics and mean dietary intake of the study population during the two intervention periods (n=34).

Dietary intake per day <sup>1</sup>	Intervention period 1	Intervention period 2
<b>Age, years</b>	24.4 ± 2.3	
<b>Weight, kg</b>	64.3 ± 11.7	63.2 ± 12.07
<b>BMI, kg/m<sup>2</sup></b>	21.7 ± 2.6	21.3 ± 2.2
<b>Dietary intake (3-day protocol)</b>		
<b>Energy, kcal/d</b>	1698 ± 552	1855 ± 578
<b>Fat, g/d</b>	63.4 ± 17.9	64.4 ± 18.7
<b>Carbohydrates, g/d</b>	250.9 ± 63.2	245.8 ± 48.1
<b>Dietary fibre, g/d</b>	20.3 ± 5.3	19.4 ± 6.0
<b>Protein, g/d</b>	60.6 ± 16.4	54.7 ± 13.7
<b>Retinol equivalents, µg/d</b>	714 ± 263	682 ± 207
<b>β-carotene, µg/d</b>	1,698 ± 1,520	1,387 ± 1,147
<b>Vitamin E, µg/d</b>	6,925 ± 6,630	7,201 ± 6,921
<b>Vitamin C, mg/d</b>	57.14 ± 34.2	63.88 ± 40.4

<sup>1</sup>Participants recorded their dietary intake over 3 days during each intervention period. Dietary records were analyzed using the DGE-PC professional software (Version 1.10.0.0) and values are expressed as means ± SD .



**Figure S1.** Effects of PAM on HUVE cell viability. Cells were seeded at a density of  $1 \times 10^5$  cells/mL in 24-well plates in complete medium with or without PAM from the anthocyanin-rich juice, which were isolated before (J (0d)) or after 28-days intervention (J (28d)) or with medium alone (con). After 36 h incubation, cells were washed twice with PBS, trypsinized and cell viability was measured using a Guava® Muse® Cell Analyzer. Data are expressed as bars [%] with standard deviation. Significant differences were calculated with ANOVA with multiple comparison test ( $n=2$ ).