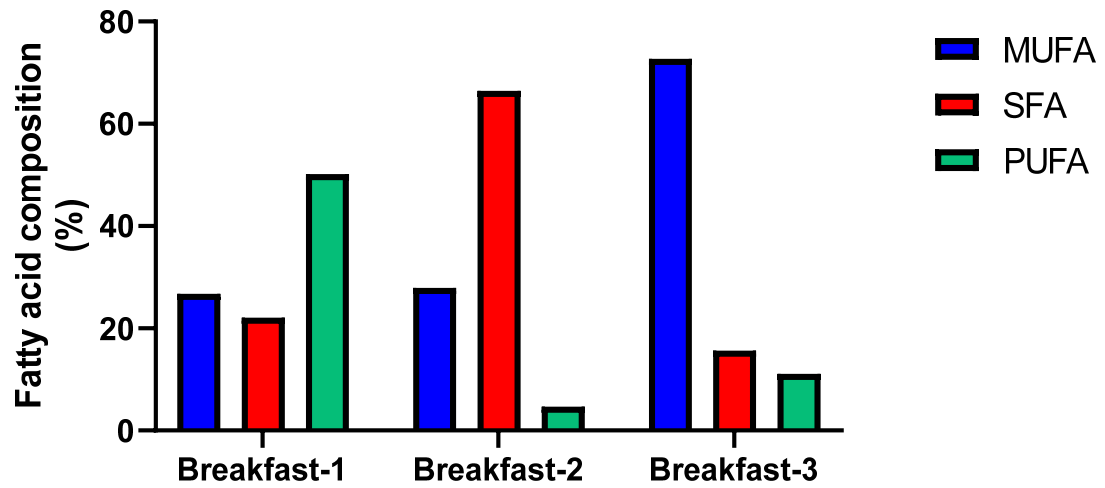


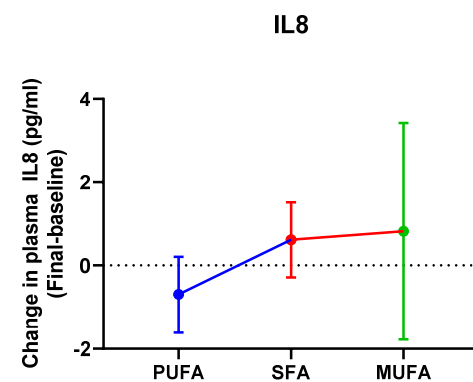
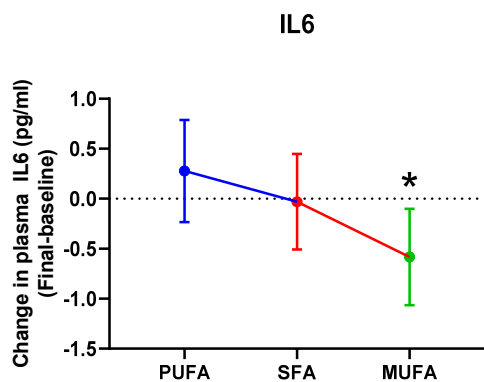
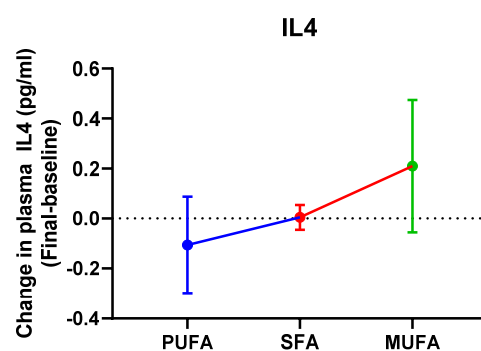
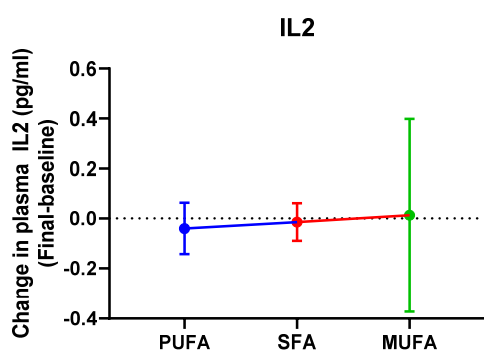
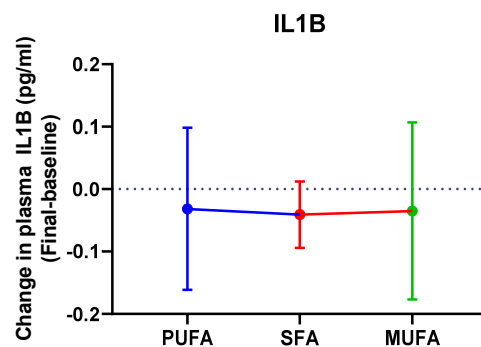
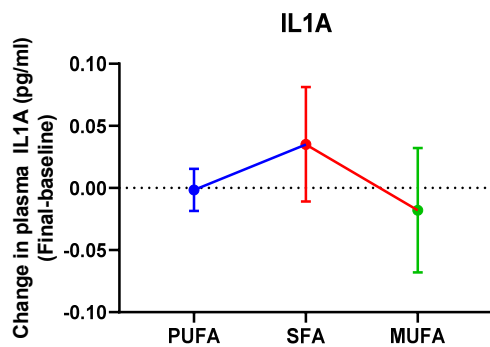
**Table S1.** Nutrient analysis and fatty acid composition of the different types of breakfast (based on the manufacturer's information).

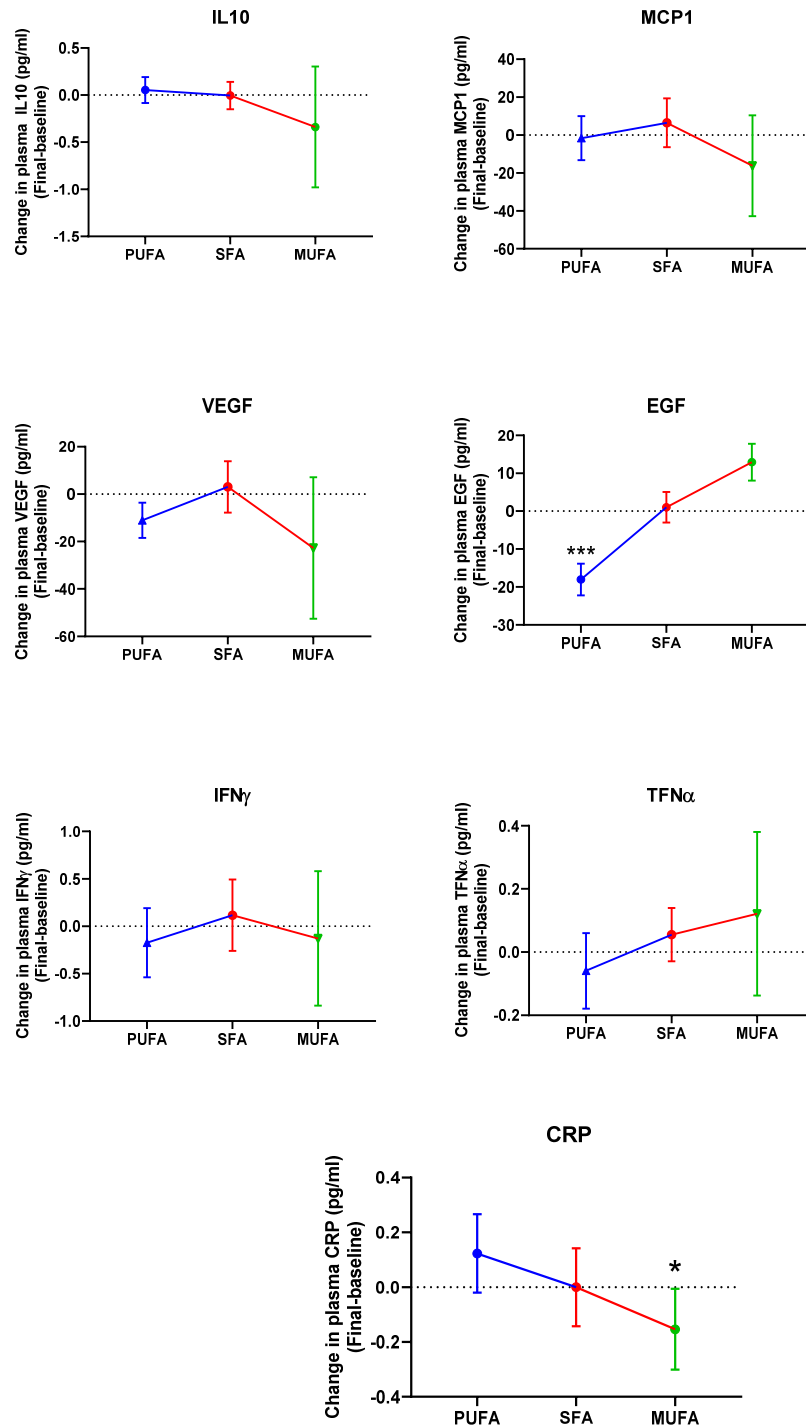
|                                    | MARGARINE | BUTTER | VIRGIN OLIVE OIL |
|------------------------------------|-----------|--------|------------------|
| <b>Energy (Kcal)</b>               | 445,84    | 448,84 | 479,84           |
| <b>Carbohydrates (g)</b>           | 54,61     | 54,53  | 54,43            |
| <b>Proteins (g)</b>                | 16,34     | 16,30  | 16,16            |
| <b>Dietary fiber</b>               | 6,35      | 6,35   | 6,36             |
| <b>Fatty acid composition</b>      |           |        |                  |
| <b>SFA</b>                         | 22.09     | 66.46  | 15.65            |
| Butyric acid (4:0)                 | -         | 3.95   | -                |
| Caproic acid (6:0)                 | -         | 2.47   | -                |
| Caprylic acid (8:0)                |           | 1.49   | -                |
| Capric acid (10:0)                 | 0.17      | 3.09   | -                |
| Lauric acid (12:0)                 | 2.84      | 3.21   | -                |
| Myristic acid (14:0)               | 1.00      | 9.14   | -                |
| Palmitic acid (16:0)               | 10.75     | 29.79  | 15.55            |
| Stearic acid (18:0)                | 7.33      | 13.32  | 0.10             |
| <b>MUFA</b>                        | 26.75     | 27.93  | 72.72            |
| Palmitoleic acid (16:1n-9)         | -         | 1.86   | -                |
| Oleic acid (18:1n-9)               | 26.75     | 26.07  | 72.72            |
| <b>PUFA</b>                        | 50.17     | 4.71   | 11.11            |
| Linoleic acid(18:2n-6)             | 49.17     | 4.34   | 10.20            |
| $\alpha$ -linolenic acid (18:3n-3) | 1.00      | 0.37   | 0.91             |
| Cholesterol (mg)                   | -         | 215    | -                |

Fatty acids data represents % fatty acids excepting cholesterol, which indicates mg/100g food. SFA: saturated fatty acids; MUFA: monounsaturated fatty acids; PUFA: polyunsaturated fatty acids.



**Figure S1.** Fatty acid composition (in fat grams per serving) of the different interventions (based on the manufacturer's information). Breakfast-1 was mainly composed by PUFA, breakfast-2 by SFA and breakfast-3 by MUFA (the figure has been described elsewhere [1]).





**Figure S2.** Estimated treatment differences (final – baseline) in all the inflammatory markers analysed in the present study. Data derived from those women who completed the study (n=51). Repeated-measures ANCOVA was employed to evaluate possible statistical differences. Baseline age, BMI and intervention order were used as covariates. PUFA represents margarine-based breakfast. SFA represents butter-based breakfast. MUFA represents extra virgin olive oil (VOO) breakfast. \*Statistically significant differences between VOO-breakfast and margarine breakfast ( $p=0.025$ ). \*\*\* Statistically significant differences between margarine and VOO breakfasts ( $p<0.001$ ).

## REFERENCES

1. Delgado-Alarcón, J.M.; Morante, J.J.H.; Aviles, F. V.; Albaladejo-Otón, M.D.; Morillas-Ruíz, J.M. Effect of the Fat Eaten at Breakfast on Lipid Metabolism: A Crossover Trial in Women with Cardiovascular Risk. *Nutrients* **2020**, *12*, 1–13, doi:10.3390/nu12061695.