

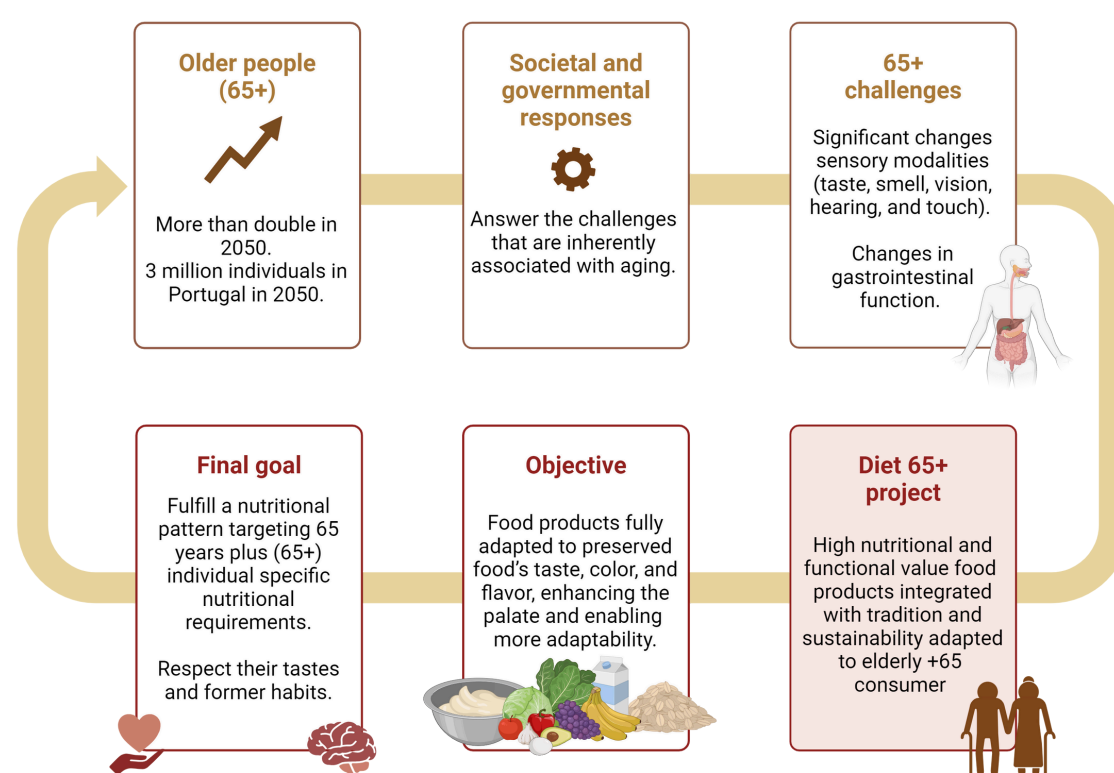
TAILORING SENIOR DIETS: USING AN *IN VITRO* FECAL FERMENTATION MODEL FOR AN ADAPTED INSTANT SOUP/PURÉE DESIGN – THE DIET65+ PROJECT

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THE DIET65+ PROJECT



THE USE OF AN *IN VITRO* GASTROINTESTINAL MODEL

THE INSTANT SOUP PASTE FORMULATIONS

Instant Soup Paste (individual portion)			
	Formulation A	Formulation B	
Legume A pulp	27.29	31.11	g/100 g
Legume B pulp	21.83	9.31	
Vegetable protein concentrate	0	1.56	
Other ingredients (vegetables)	23.47	26.76	
Water	27.29	31.11	
Protein	15.13	15.18	g
Fiber	27.03	16.53	(portion)
Fat	4.09	3.74	

Nutritional Claims

Protein

High in Protein
Formulation A and B

Fiber

High in Fiber
Formulation A

Source of Fiber

Formulation B

Soup Paste preparation

Instant Paste



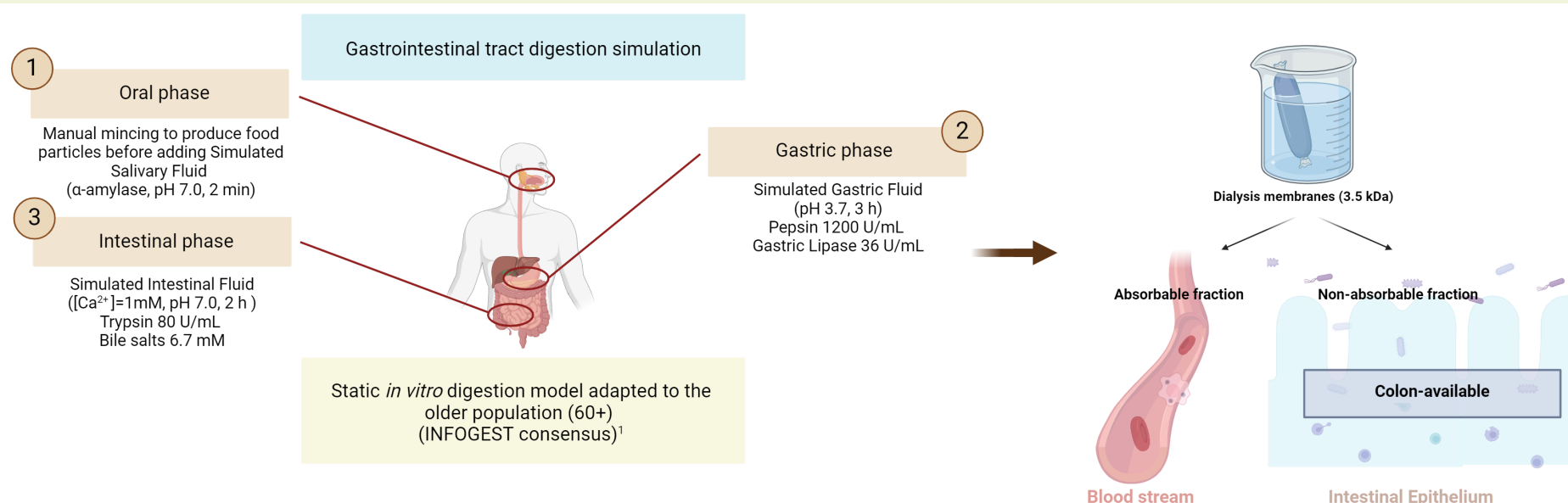
Reconstitution in boiling water

100 mL

Ready-to-eat soup

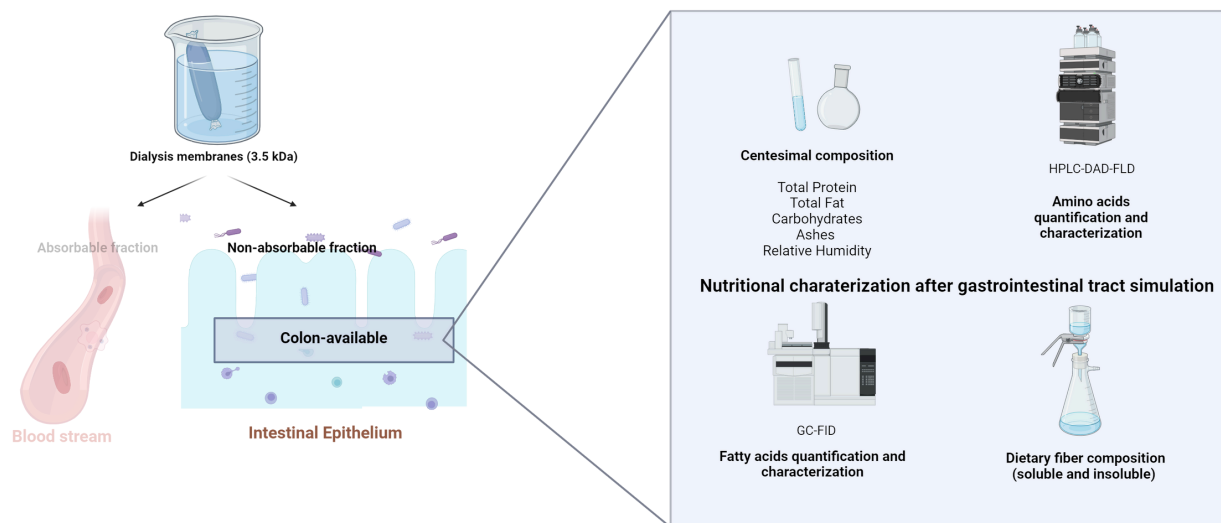


THE EFFECT OF THE GASTROINTESTINAL TRACT

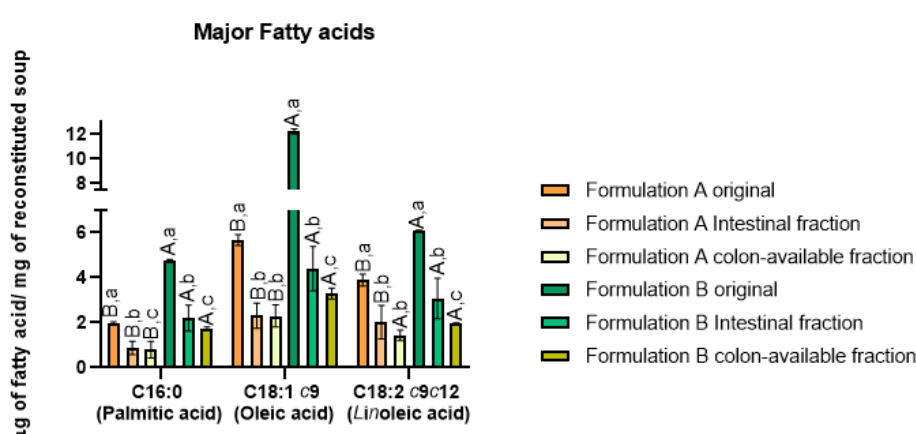


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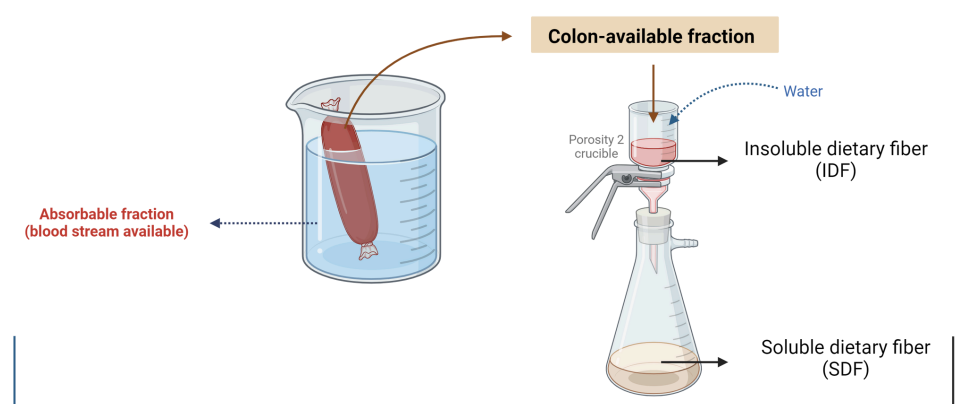
THE USE OF AN *IN VITRO* GASTROINTESTINAL MODEL



RESULTS - AFTER GASTROINTESTINAL TRACT

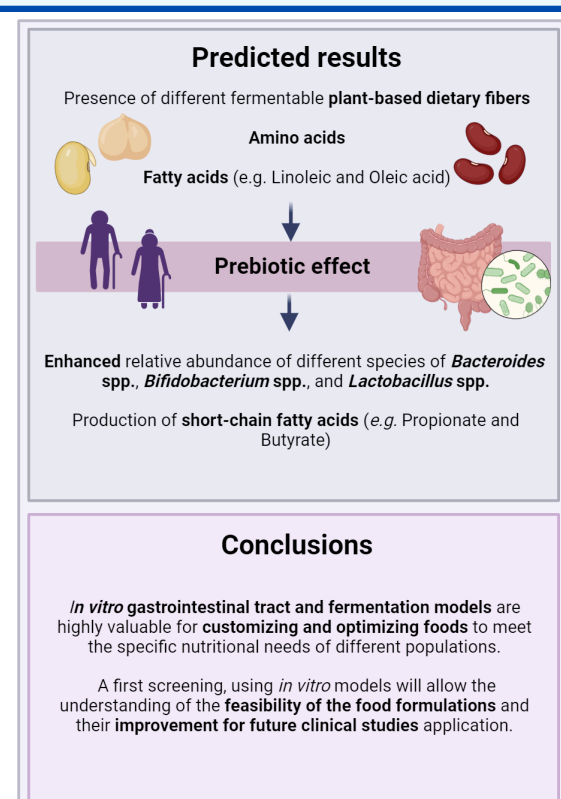
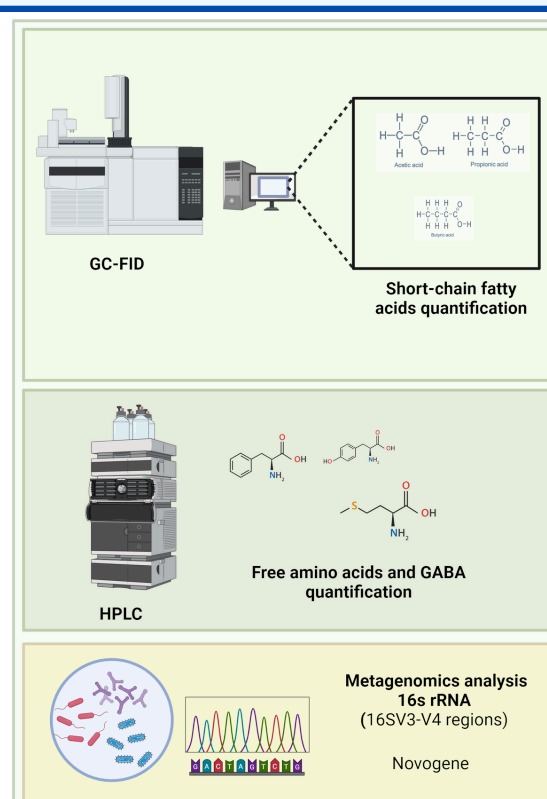
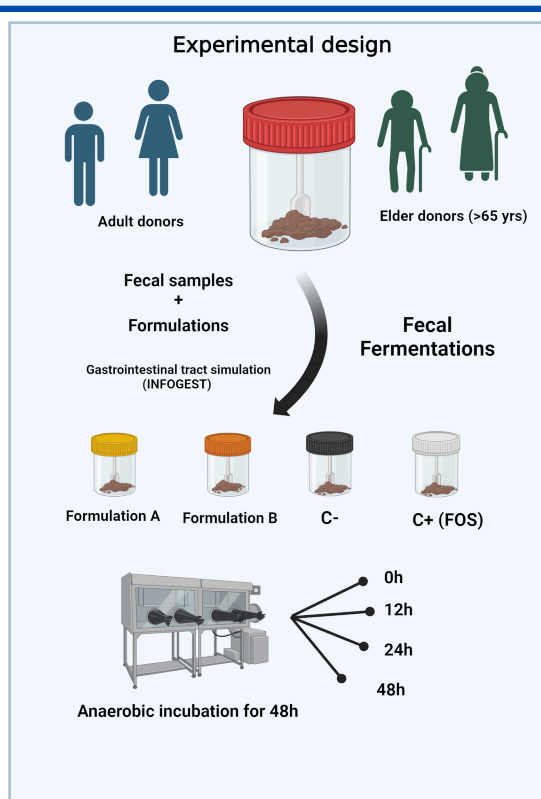


The major fatty acids in the two formulations (A and B) were analyzed in the original sample, after gastrointestinal digestion in the intestinal fraction, and in the colon-available fraction. Different lowercase letters indicate statistical significance ($p < 0.05$) among the different fractions from the same sample. Different uppercase letters indicate statistical differences ($p < 0.05$) between the two formulations within the same fraction.



	IDF (+resistant protein)	SDF (+resistant protein)	Total Fiber (+resistant protein)	
Formulation A	14.57±4.16	2.15±0.01	16.73	g of fiber/ individual portion of soup
Formulation B	8.21±2.44	0.74±0.55	8.96	

THE IMPACT ON GUT MICROBIOTA: A FUTURE STUDY



ACKNOWLEDGEMENTS AND REFERENCES

This work was developed in the scope of “Diet65+ - High nutritional and functional value food products integrated with tradition and sustainability adapted to elderly +65 consumer” project, which is part of Agenda VIIAFOOD – Plataforma de Valorização, Industrialização e Inovação Comercial para o AgroAlimentar (n°C644929456-0000040), a project supported by Plano de Recuperação e Resiliência (PRR, www.recuperarportugal.gov.pt).

References:

1. O. Menard, et al. Static in vitro digestion model adapted to the general older adult population: an INFOGEST international consensus, Food and Function 14 (2023) 4569–4582. <https://doi.org/10.1039/d3fo00535f>.