Food & Function

Electronic Supplementary Information

Corn cob and corn silk-based ingredients exhibit bioaccessible and antioxidant phenolic compounds displaying anti-inflammatory effects in vitro

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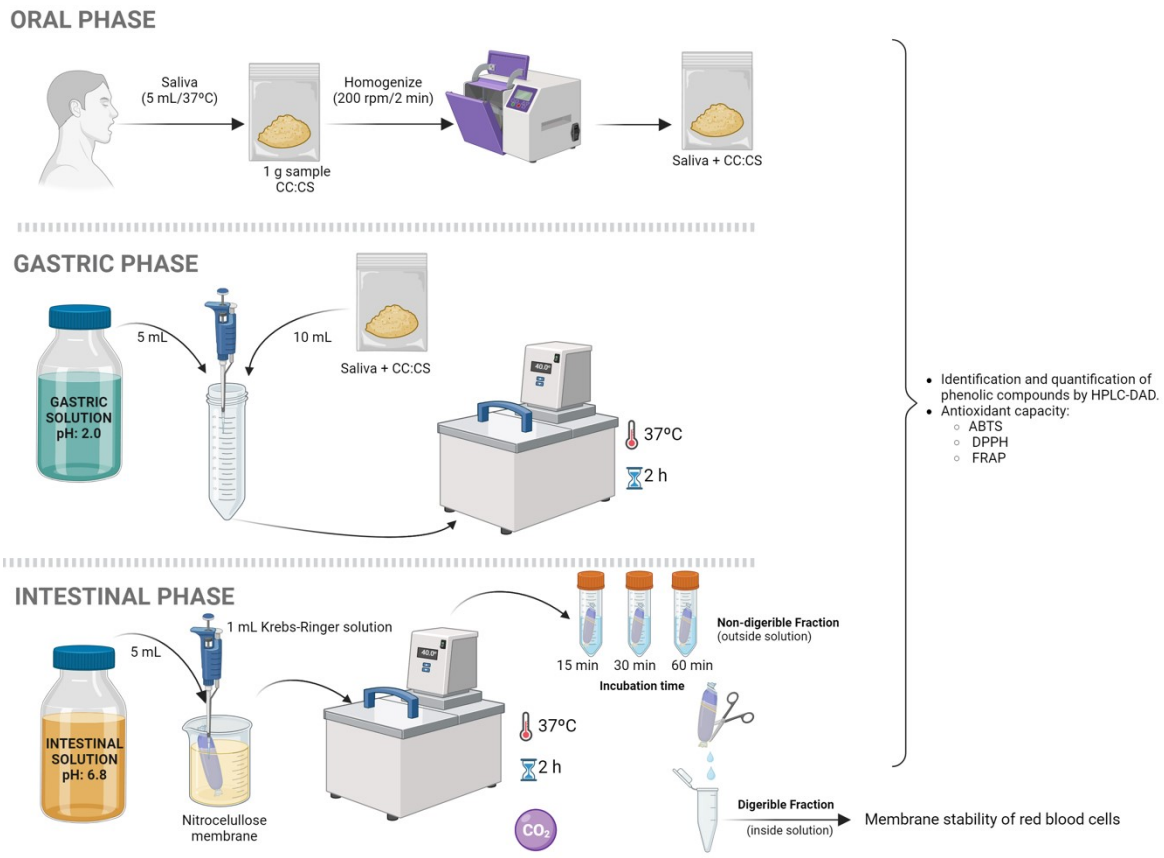
Supplementary Table S1. Binding energies between selected phenolic compounds and a model 1-palmitoyl-2-oleosyl-sn-glycero-3-phosphocholine (POPC), 1-palmitoyl-2-oleosyl-sn-glycero-3-phosphoethanoamine (POPE), and cholesterol membrane.

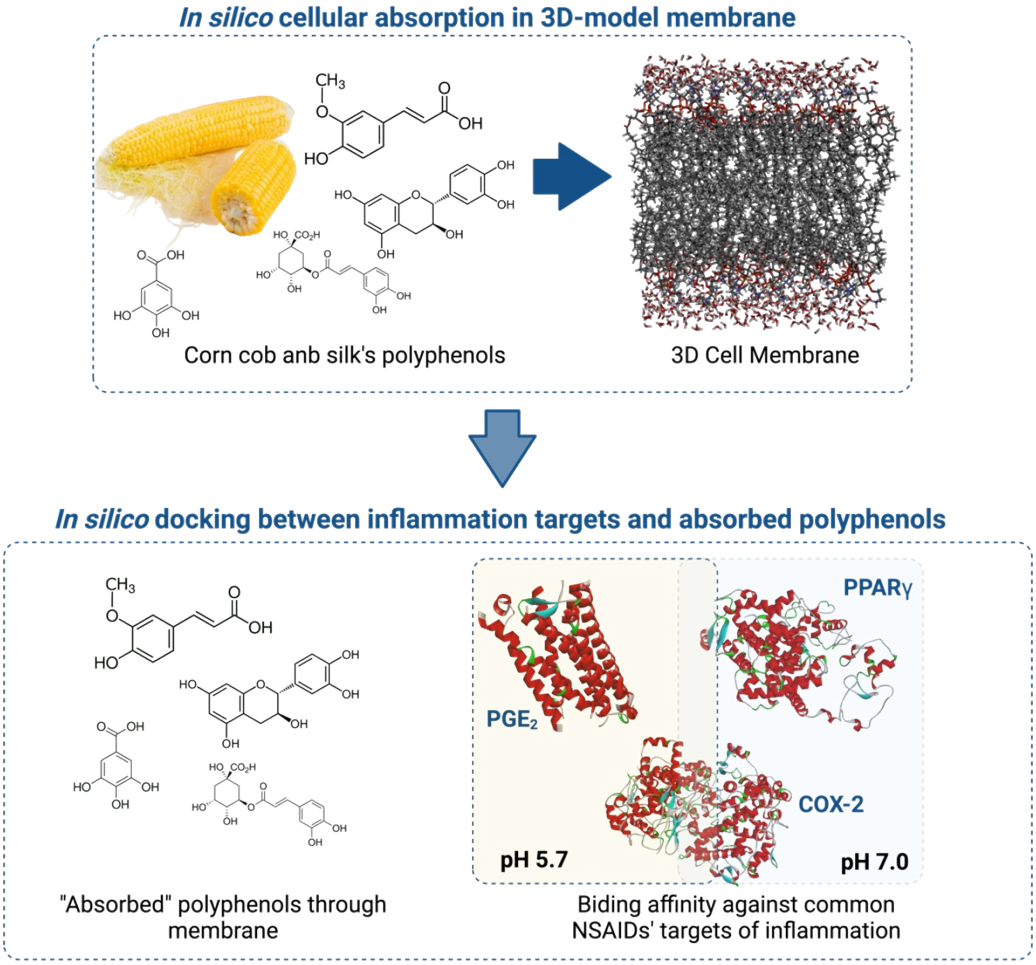
Phenolic compounds	**Gibbs' Free energy (ΔG)**
Hydroxybenzoic acids	
Gallic acid	-6.30
2,3-dihydroxybenzoic acid	-6.40
Syringic acid	-6.40
Hydroxycinnamic acids	
p-Coumaric acid	-8.10
Chlorogenic acid	-8.60
Ferulic acid	-7.30
Flavanols	
(+)-Catechin	-9.40

Supplementary Table S2. Main energy binding values between selected (poly)-phenols and inflammation targets at two experimental pH values (5.7 and 7.0) in a model of membrane instability.

Compounds	PGE_2		COX-2		PPARγ		PAF-R	
	pH 5.7	**pH 7.0**	**pH 5.7**	**pH 7.0**	**pH 5.7**	**pH 7.0**	**pH 5.7**	**pH 7.0**
Hydroxybenzoic acids								
Gallic acid	-5.20	-6.20	-6.80	-6.30	-6.10	-6.10	-6.50	-6.70
2,3-dihydroxybenzoic acid	-5.80	-4.90	-6.40	-6.30	-6.70	-5.80	-6.30	-6.40
Syringic acid	-5.20	-5.20	-6.30	-60	-5.50	-5.70	-6.70	-5.10
Hydroxycinnamic acids								
p-Coumaric acid	-6.80	-6.00	-6.70	-6.70	-7.10	-6.70	-7.30	-7.20
Chlorogenic acid	-6.20	-5.90	-7.90	-8.60	-7.80	-7.10	-7.30	-6.20
Ferulic acid	-6.80	-6.80	-6.90	-6.40	-6.80	-6.80	-6.30	-6.90
Flavanols								
(+)-Catechin	-6.90	-6.80	-9.30	-9.20	-8.50	-8.50	-7.80	-7.40



Supplementary Fig. S1. Schematic diagram *in vitro* gastrointestinal digestion



Supplementary Fig. S2. *In silico* analysis procedure