

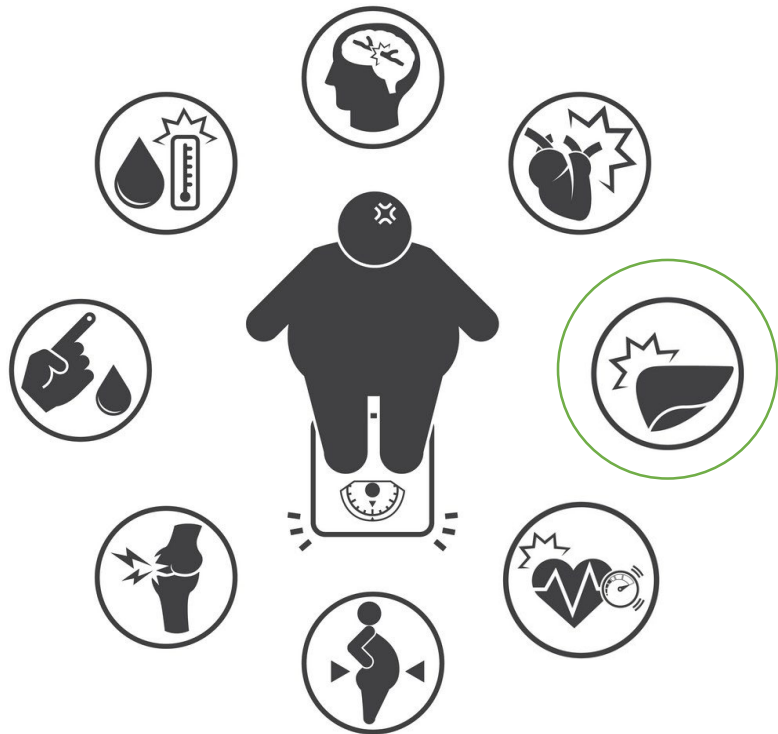
Evaluation of the hypolipidemic properties of cocoa shell after simulated digestion using in vitro techniques and a cell culture model of non-alcoholic fatty liver disease

Cheyenne Braojos, Vanesa Benitez, Miguel Rebollo-Hernanz, Silvia Cañas, Yolanda Aguilera, Silvia M. Arribas and Maria A. Martin-Cabrejas



1st International Electronic Conference on Food Science and Functional Foods

INTRODUCTION



NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD)

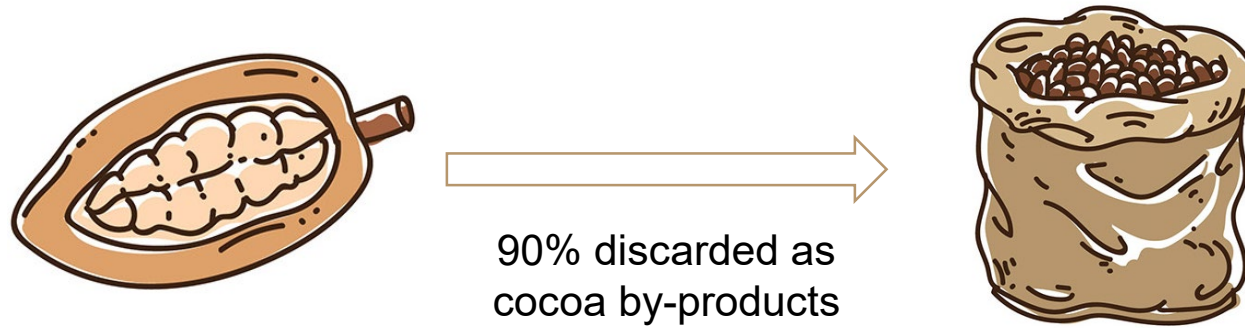
No proper pharmacological treatments



Finding novel ingredients to reduce incidence



INTRODUCTION

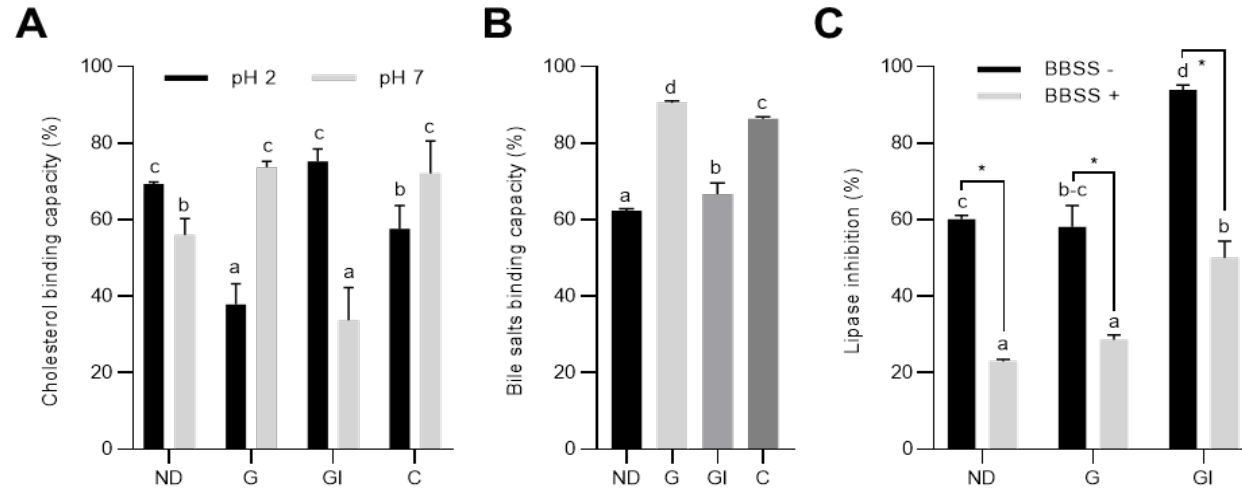


COCOA SHELL

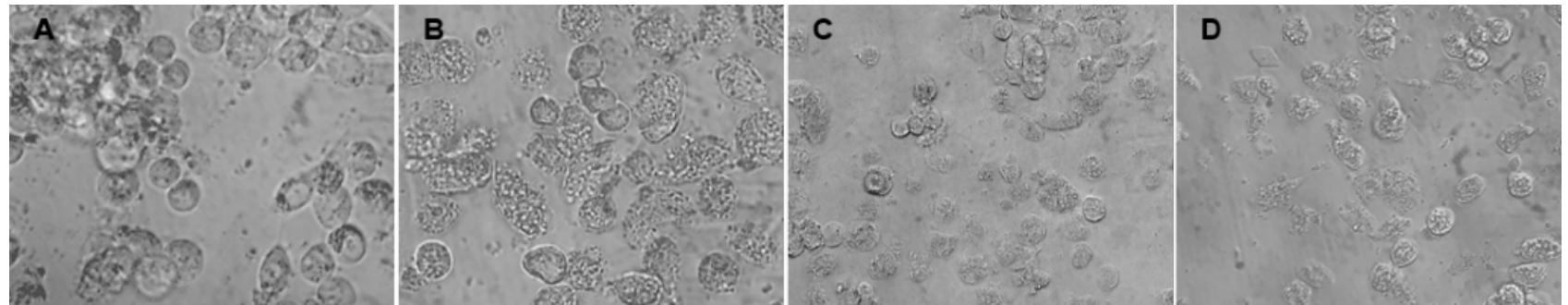
- ✓ A rich source of **dietary fiber** and **phenolic compounds**
- ✓ Validated as a **safe** ingredient
- ✓ Potential source of nutrients and health-promoting compounds used as **nutraceutical** to manage **chronic diseases** like **NAFLD**

RESULTS

Simulated *in vitro* digestion enhanced the hypolipidemic properties of cocoa shell



Cocoa shell was not toxic and regulated PA- stimulated ROS formation and lipid accumulation



CONCLUSIONS

- Digestion positively impacted the cocoa shell's hypolipidemic properties, leading to enhanced biological activity *in vitro* and in cell culture models.
- Since the cocoa shell might be used as a safe novel ingredient to prevent hyperlipidemia and regulate lipid metabolism, future animal and clinical investigations will be necessary to confirm the effects observed *in vitro*.



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