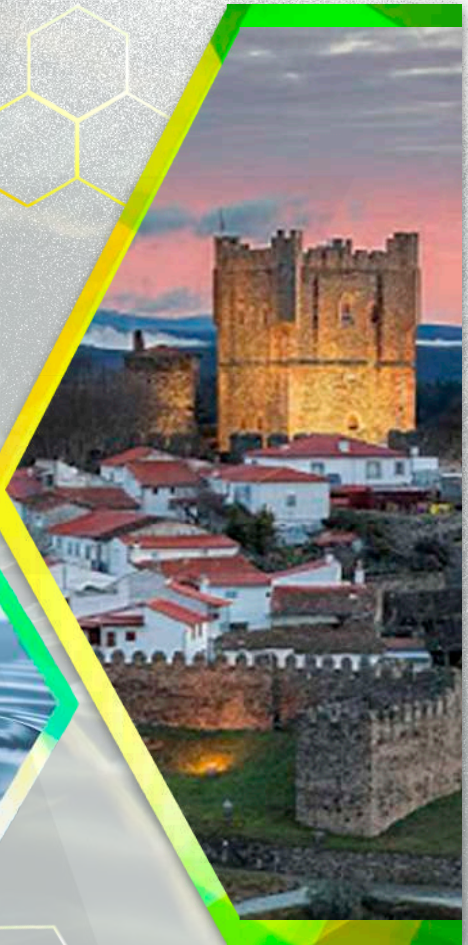




# Natural products application: Health, Cosmetic and Food

Provided by nature, adapted scientifically for industry



**Book of abstracts**  
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## PCF-66

**PHENOLIC AND BIOACTIVE PROFILES OF TEN COLORED POTATO PEELS**

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The pharmaceutical and food industries have been exhaustively prospecting the use of natural products as sources of bioactive molecules to substitute synthetic drugs and food additives. Withal, the valorization of bio-residues abundant in bioactive phytochemicals that are commonly rejected, like potato peels, could pitch in to the development of more sustainable, both economically and socially, productive chains [1]. In this study an unprecedented in-depth characterisation of the non-anthocyanin and anthocyanin phenolic compounds of potato peels from ten colored potato varieties was performed. Beyond that, the antioxidant, cytotoxic and anti-inflammatory potentials of the samples were explored for the first time. Among non-anthocyanin phenolics, caffeic and a caffeoylquinic acid were found in the highest concentrations in all samples, which also showed the presence of *O*-glycosylated flavonol derivatives and polyamine derivatives. Acylated anthocyanins were detected in red and purple varieties, being pelargonidin, peonidin, and malvidin the most prominent aglycones. All samples displayed antioxidant and antiproliferative actions, and no toxicity towards non-tumor cell lines up to the concentration of 304 µg/mL. The Rosemary variety presented the best antioxidant and antitumor activities, and was the only sample to show anti-inflammatory effects. Such promissory findings support the exploitation of potato peels as valuable sources of bioactive compounds and as natural additives in functional food formulations.

**References**

[1] S. L.Sampaio, S. A. Petropoulos, A. Alexopoulos, S. A. Heleno, C. Santos-Buelga, L. Barros, I. C. F. R. Ferreira, Trends in Food Science and Technology, 103 (2020) 401.

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