

# 2<sup>nd</sup> International Conference on FOOD BIOACTIVES & HEALTH

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Program and Abstracts

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## phenolic compounds as natural alternatives to artificial food additives: colouring, preserving, and bioactive agents

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Phenolic compounds represent a wide group of molecules with well-recognized beneficial properties for human health. Beyond their worldwide use for bioactive purposes, these compounds have been increasingly explored for food industry application. Indeed, several polyphenols have proved effectiveness as colouring, preserving, and bioactive agents in foodstuff, which can represent a great advance in food additives safety, once some artificial additives have associated risks to human health [1]. In this context, and in an attempt to explore safer and effective alternatives, phenolic compounds find great application as natural counterparts, specially flavonoids and phenolic acids. Among the studied molecules, betalains (e.g. gomphrenin II, gomphrenin III, isogomphrenin II, and isogomphrenin III) obtained from purple globe amaranth and anthocyanins (e.g. cyanidin, delphinidin, and malvidin derivatives) from rose, dahlia, centaurea, strawberry-tree, roselle, and blueberry were incorporated in ice-cream, yogurt, and waffles for colouring purposes [e.g. 2]. On the other hand, several polyphenols extracted from strawberry-tree, basil, lemon balm, sweet chestnut flowers, fennel, and German chamomile were studied for their preservative properties in loaf bread, cupcakes, yogurt, cheese, and cottage cheese, namely flavonoids (e.g. catechin, and quercetin and luteolin derivatives), phenolic acids (e.g. rosmarinic, chicoric, lithospermic, caffeic, and caffeoylquinic acids), and hydrolysable tannins (e.g. trigalloyl-HHDP-glucoside) [e.g. 3]. Regarding bioactive compounds, phenolic acids (e.g. rosmarinic acid), flavonoids (e.g. quercetin derivatives), and ellagitannins (e.g. sanguiin H-10 and lambertianin) from mushrooms, wild strawberry, rosemary, mountain sandwort, and flowers of silva brava were introduced in gelatin, yogurt, and cottage cheese [e.g. 4]. Given the evidenced wide applicability of polyphenols, these natural molecules seem to be promising alternatives to food artificial additives.

### References

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