Abstracts

FOR

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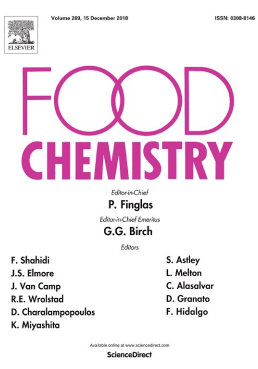

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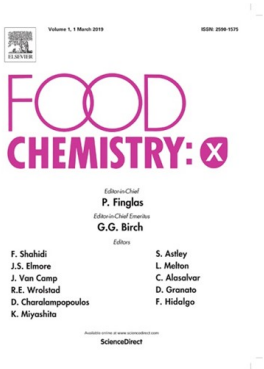

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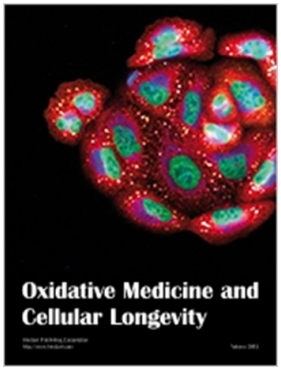

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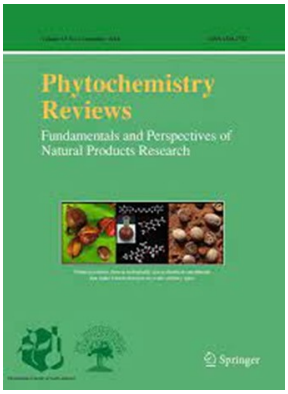

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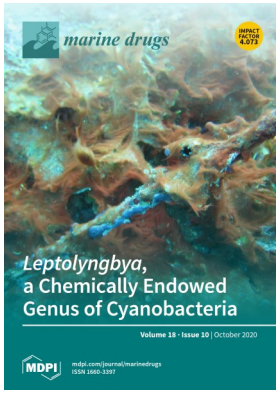

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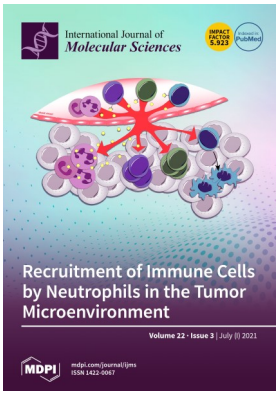

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GL27: Bioactive profile of the extract of the petals of *Impatiens walleriana* as a natural food coloring alternative

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In addition to improving sensory aspects, the incorporation of edible flowers in the human diet has been described as able to promote benefits for consumer health, mainly associated with their phenolic composition [1]. *Impatiens walleriana* Hook.f. is an edible ornamental plant, originally from East Africa and popularly recognized for its attractive colorful flowers [2]. The bioactivities present in flowers of the genus Impatiens have auspicious potential for the food, pharmaceutical and cosmetic industries [3]. In this sense, the present work focused on the chemical and bioactive characterization of flowers of *Impatiens walleriana* Hook species, particularly the pink and orange varieties.

The phenolic compounds were determined by high performance liquid chromatography coupled to a diode detector and a mass spectrometry detector (HPLC-DAD-ESI/MS) and the bioactive compounds were evaluated through *in vitro* assays by determining the antioxidant (through the inhibition of the oxidative hemolysis assay, OxHLIA), antimicrobial (by means of a panel of six bacteria and six fungi) and anti-inflammatory activities (in mouse macrophage cells) and cytotoxicity (in tumor and non-tumor cell lines using the sulforhododamine B method).

Both studied samples showed significant amounts of phenolic compounds, namely four phenolic acids, one flavonone and ten anthocyanins (divided into malvidins, pelargonidins and peonidins) being that the orange variety showed a total amount of compounds lower than the pink variety. Likewise, although both extracts presented a good bioactive performance in all tests carried out, the pink variety stood out as being superior compared to the orange variety. Overall, the flowers of *I. walleriana* emerge as a promising resource to be explored by the food industry.

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