

THERAPEUTIC ADVANCES in *Drug Safety*

Contents

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CONFERENCES (ABSTRACTS FROM CONFERENCES)	9
ORAL COMMUNICATIONS	17
POSTER PRESENTATIONS: PATIENT-CENTERED SAFETY	25

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Abstract-Post-63 Other

Valorisation of pomegranate surpluses by fermentation and evaluation of its antioxidant activity

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Background: Fruits are antioxidants' natural sources, having numerous therapeutic properties [1]. Pomegranate (*Punica granatum*) stands out for its high antioxidant activity [2]. Nevertheless, its consumption and processing generate by-products such surpluses of whole fruit or isolated parts. This waste can be valued by microbial fermentation, that improves bioavailability and functional properties [3], allowing its reutilization for food purposes, as dietary supplements and cosmetic products. **Objectives:** This study aimed at evaluating the antioxidant activity of the products resulting from pomegranate fermentation. **Methods:** Four fermentation assays were carried out on pomegranate surpluses collected in the market, using the fruit autochthonous microorganisms and several isolated or mixed fruit parts (peels, seeds, membranes and pulp). Each assay was performed in duplicate and monitored until a reduced and stable pH value was attained. The antioxidant activity was assessed using the Folin-Ciocalteu method, Cupric Reducing Antioxidant Capacity method, and the total antioxidant capacity using 2,2'-azino-bis (3-ethylbenzothiazoline-6-sulfonic acid) method. **Results:** Analysing the results of the three methods, pomegranate by-products were found to have

antioxidant activity under all the conditions tested. Samples with peel and membranes showed the highest antioxidant activity (213.08-607.79 $\mu\text{mol/g}$), followed by the mixture of pulp, seeds and membranes (7.77-30.51 $\mu\text{mol/g}$), and the lowest activity was observed with only pulp (1.91-7.03 $\mu\text{mol/g}$). **Conclusions:** This study promotes a sustainable approach to use surpluses resulting from food waste and fruit processing industries, indicating the possibility of economically valuing them as functional resources in the pharmaceutical and food industry.

Keywords: Pomegranate, fermentation, antioxidant activity.

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Abstract-Post-64 Other

Innovative transdermal therapy: ibuprofen ionic liquids for inflammatory bowel disease

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Background: Inflammatory bowel disease is a chronic gastrointestinal condition with increasing incidence and prevalence. Current treatments are primarily palliative and often leads to severe adverse effects and refractory cases. Ionic liquids