

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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analyze dietary supplements (DS) containing plants, sold online, with galactagogue indications. **Methods:** A descriptive, cross-sectional study was conducted, using Google® platform to collect galactagogue DS in January 2025. Included criteria were DS for human use, DS with isolated or combined plants, stores selling DS. Labelling information, including active ingredients, indications for use, adverse reactions, interactions, and contraindications, was collected from the analysed DS. **Results:** A total of 16 DS from 14 websites were included in the study (ten containing mixtures of plants and six containing a single plant). In total, 21 different plants were identified. Fennel (*Foeniculum vulgare*) (seven DS) and fenugreek (*Trigonella foenum-graecum*) (six DS) were the most commonly used. Information on contraindications, such as not recommended for pregnant women, children, or individuals with allergies (to fish, fish oil, or soy), or in cases of known hypersensitivity to some ingredient, was included in 12 DS (75.0%). Only three DS (18.8%) provided details on adverse reactions and two DS on potential interactions (12.5%). **Conclusions:** The DS analyzed exhibited variations in their composition. Standardized studies are needed to demonstrate the efficacy and safety of these supplements, as well as to validate the effectiveness of the formulations and the potential synergistic effects between the plants.

Keywords: Galactagogue plants, milk production, dietary supplements

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Abstract-Post-76 Other

Dietary supplements and cosmetics with cannabis sativa L. and/or cannabidiol: analysis of labelling information and cannabinoid quantification methods

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Background: The growing interest in the potential benefits of *Cannabis sativa* L. (CS) and cannabidiol, has boosted the marketing of dietary supplements (DS) and cosmetic products (CP). However, legal compliance and labelling information lack raises concerns about consumer safety [1]. **Objectives:** Analyse labelling information on DS and CP containing CS and/or cannabidiol, available online, and review cannabinoid quantification analytical methods (CQAM). **Methods:** A descriptive, cross-sectional study was conducted from August to October 2024 to collect DS and CP from websites (e.g. pharmacies, herbal stores) containing CS and/or cannabidiol, isolated or in mixtures. The labelling information was analysed (uses, ingredients, interactions, adverse reactions). A literature review was conducted in December 2024 using PubMed® to gather studies about CQAM, using the keywords “Chemistry Techniques, Analytical” [Mesh], “*Cannabis sativa*”, “Cannabinoids”. **Results:** A total of 60 products (22 DS; 38 CP) were identified. The most common ingredient was seed oil, present in 73% of DS and 59% of CP. The main indications were associated with skin hydration (16 CP), and as a complement in nervous system problems (18 DS). The literature review resulted in 16 studies. Two high-performance liquid chromatography methods were found the best for cannabinoid quantification, demonstrating good linearity, precision and accuracy. **Conclusions:** Ingredients, such as CS seed oil and cannabidiol, showed inconsistencies with current Portuguese legislation. Collected DS and CP may differ in CS and other contents, highlighting the importance of quality control and regulatory monitoring, using the validated CQAM identified in this study.

Keywords: *Cannabis sativa* L., cannabidiol, labelling information.

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Abstract-Post-81 Other

Potential activity of withanolides in breast cancer treatment: a systematic review

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Background: Portuguese female population data from 2021 indicate that 31.6% of all tumours were breast cancer (BC), with 8,714 new cases reported [1]. Withanolides, a group of steroidal lactones found in plants such as *Withania somnifera*, *Physalis peruviana*, and *Tubocapsicum anomalum*, exhibit potential anticancer activity and are considered promising compounds for the treatment of BC [2]. **Objectives:** Discuss the effectiveness and the potential mechanisms of action of withanolides in the treatment of BC. **Methods:** Following PRISMA guidelines, a systematic review was conducted to evaluate *in vitro* and *in vivo* activity of natural/synthetic withanolides in BC, using original articles published in English (until December 2024) found in ScienceDirect® and Pubmed® databases and using the keywords “withanolides” and “breast cancer”. **Results:** A total of 34 studies were analysed (24 *in vitro*, three *in vivo*, seven combining both type of approaches), with withaferin A being the predominant compound. The effectiveness of withanolides was evaluated using different approaches, such as cell viability/cell proliferation assays and analysis of apoptosis. The doses of withanolides used in

studies and cancer cell lines (e.g., MCF-7, MDA-MB-231) ranged typically from 2 to 5 μ M (*in vitro* studies) and from 4 to 8 mg/kg (*in vivo* studies). The mechanisms of action included cell cycle arrest (e.g., at the G2/M phase), modulation of oxidative stress, induction of apoptosis, inhibition of cell proliferation. **Conclusions:** Further studies are needed to confirm the results in clinical trials and to assess the potential of this group of steroidal lactones.

Keywords: *Withania somnifera*, withaferin A, breast cancer

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Abstract-Post-82 Other

Access to community pharmacies by rural populations in northeastern portugal

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Background: Rural populations face challenges in accessing medicines and healthcare due to depopulation and geographic isolation. Community pharmacies play a vital role as the main point of care in these regions (1,2,3). **Objectives:** This study aims to explore the accessibility of community pharmacies in rural areas, understand the satisfaction and identify challenges. **Methods:** This is