

Exploring Excellence: A Special Journal Issue on Scientific Advancements from the University of Zagreb Faculty of Pharmacy and Biochemistry

University of Zagreb Faculty of Pharmacy and Biochemistry (Faculty) is the leading teaching and scientific institution in the Republic of Croatia that educates pharmaceutical and medical-biochemical experts. In addition to its educational role, the Faculty has a rich scientific activity, which is evident from its publishing score. Through scientific and research projects, the Faculty fosters strong collaboration with other universities, research institutes, the pharmaceutical industry, hospitals, public health institutions, and pharmaceutical and medical-biochemical professionals at the national and international levels.

This is the first time that an issue of the scientific journal is dedicated to the scientific activity of the Faculty, providing a comprehensive overview of different research areas that hold significance for the scholars employed within the Faculty. In addition, the Faculty has provided financial support for the publication of this issue.

This issue includes thirteen original research papers. Four papers cover the area of clinical pharmacy: one study aims to explore the adherence to oral anticancer medications in female patients with advanced breast cancer, while the other is on the topic of early-stage hormone receptor-positive breast cancer patients' beliefs about their adjuvant endocrine therapy influence adherence. The third paper explores the effects of a new pharmacist-led service at the primary care level on blood pressure control among hypertensive patients and the fourth one brings new knowledge on pain control in thoracic surgery. Three papers belong to the area of pharmaceutical technology, precisely the development of novel formulations as a strategy to upgrade current therapy or deliver nutraceuticals and antioxidants. Two papers deal with nanotechnology: the development of selenium nanoparticles functionalized with valuable polyphenols from olive pomace, and nanoformulations loaded with xanthophyll carotenoids. One paper describes the development of azithromycin-loaded liposomes incorporated into chitosan hydrogel as a strategy to combat methicillin-resistant *Staphylococcus aureus*-related skin infections. A diverse field of analytical chemistry is represented in three papers. In the first paper, the authors propose a new analytical method for the analysis of adalimumab based on the use of size-exclusion chromatography. In the second paper, the authors have developed the method for the determination of macrolide antibiotics in process wastewater samples which involves solid phase extraction and capillary electrophoresis. In the third paper, the authors investigated the content of oleuropein in an extract of olive leaves, branches and stems, by employing the HPLC- DAD analysis method. The remaining papers belong to very distinctive research areas: a medicinal chemistry paper describes the synthesis of new hybrid compounds based on harmine and chloroquine/mefloquine and their antiproliferative and antiplasmodial activity, a prospective study investigates the impact of post-thaw exposure

duration to DMSO on the cell viability and stability of peripheral blood stem cell samples, and a paper honouring the 155th anniversary of Mendeleev's discovery of the periodic table of elements which will be in 2024.

I express my gratitude to the authors who have decided to share the results of their valuable research in this issue. The completion of this challenging task would not have been possible without the huge contribution of the reviewers, to whom I extend my sincere gratitude. I also extend my appreciation to the Editor-in-Chief and Technical Editor, for providing insightful guidance throughout the preparation of this issue.

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