Volume: 38

Issue: Sup1

Year: 2024

Review of Clinical Pharmacology and Pharmacokinetics International Edition

Proceedings of the **1st Conference of the Hellenic Scientific Society of** <u>Aesthetics</u> 2-3 December 2023 University of West Attica, Athens, Greece



Published by PHARMAKON-Press pISSN: 1011-6583 | eISSN: 2945-1922

Volume: 38

Review of Clinical Pharmacology and Pharmacokinetics International Edition

Founders Professor Stavros T. Plessas MD • Dr Charalampos T. Plessas

> Publisher & Editor-in-Chief Dr Eleni S. Plessa

6-8 Estias, GR-115 26, Athens, Greece Tel- Fax: +30210 7700663 Mobile: +447827458984, +306944524633 Emails: <u>eplessa@pharmakonpress.gr</u> & <u>pharmakonpress@pharmakonpress.gr</u>

**Guest Editor** 

Professor Vasiliki K. Kefala Dean of the School of Health and Wellfare Sciences Head of the Laboratory of Dermatology -Aesthetics & Laser Applications (lab LAD) Department of Biomedical Sciences, Direction of Aesthetics and Cosmetology University of West Attica, Athens, Greece

Original Papers, Review Articles, as well as short preliminary communications will be considered for publication and should be sent to the Editor-in Chief

> Open access articles published in this Journal are **Indexed or Abstracted** in: Scopus • Chemical Abstracts • Crossref • ResearchGate • Google Scholar OpenAIRE • SCImago Journal and Country Rank Factor

Further information regarding the Journal can be seen in the web address: https://pharmakonpress.gr/en



Published three times a year by PHARMAKON-Press pISSN: 1011-6583 eISSN: 2945-1922

#### **EDITORIAL BOARD**

**Prof. Fragkiski Anthouli- Anagnostopoulou**, Department of Biomedical Sciences, Faculty of Health and Caring Sciences, University of West Attica, **Greece** 

**Prof. Hussam W. Al-Humadi**, MBBS, MSc, PhD, College of Pharmacy, University of Babylon, **Iraq** 

**Prof (Associate) Fotoula Babatsikou**, MD, RN, MSc MPH, PhD, Professor (Associate), Department of Medical and Health Sciences / Nursing and Midwifery, University of West Attica, **Greece** 

Assist. Prof. Anastasia Bothou, MSc, PhD, Assistant Professor of Gynecological Care and Breast Health, Department of Midwifery, University of West Attica

**Prof. Dimitrios Chaniotis**, Professor of Cardiology & Physiology-Nutrition, Head of the Department of Biomedical Sciences, School of Health & Care Sciences, University of West Attica, **Greece** 

Prof. Anna Deltsidou, Professor at Midwifery Department, University of West Attica, Greece

**Prof. Marianna Diomidous**, Faculty of Nursing, National and Kapodistrian University of Athens **Greece Prof. George latrakis**, Em. Professor at Midwifery Department, in School of Health and Welfare Sciences in University of West Attica, **Greece** 

**Prof. Athena Kalokairinou**, Professor in Community Nursing, President of the Undergraduate Studies Committee, Director of Laboratory Community Nursing, Faculty of Nursing, National and Kapodistrian University of Athens, **Greece** 

**Prof. Valia Kefala**, Dean of the School of Health and Wellfare Sciences, Head of the Laboratory of Dermatology - Aesthetics & Laser Applications (lab LAD), Department of Biomedical Sciences, Direction of Aesthetics and Cosmetology, University of West Attica, **Greece** 

**Prof. Helen Kintziou,** Laboratory of Chemistry-Biochemistry - Cosmetology, Department of Biomedical Sciences, University of West Attica **Greece** 

**Prof. Dimitris Kouvelas**, Professor of Pharmacology and Clinical Pharmacology, Aristotle University of Thessaloniki, School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, **Greece** 

**Prof. Charis Liapi**, Professor of Pharmacology at the Medical School of National and Kapodistrian University of Athens, **Greece** 

**Prof. Katerina Likeridou**, National and Kapodistrian University of Athens, Greece

**Dr Simon Malas**, MD, MD, MP, M Sc Oncology, Dipl Pall Med, Pole, M Sc Hosp Adm, Ph D, Consultant Clinical Oncologist, Head Oncology Clinic, Limassol General Hospital Limassol, **Cyprus** 

**Prof. John Mantas**, Computing in Mathematics, Natural Science, Engineering and Medicine, National and Kapodistrian University of Athens **Greece** 

**Prof. Christos G. Massouros**, Professor of Mathematics, Core Department, National and Kapodistrian University of Athens, **Greece** 

**Dr Elisabeth-Adamantia Masourou**, MD, Internal Medicine Doctor, National and Kapodistrian University of Athens, **Greece** 

Prof. Paraskevi Papaioannidou, Professor of Pharmacology, Director of the 1st Department of Pharmacology, School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Greece

**Dr Niki Georgatou-Papageorgiou**, Coordinator of Asthma Group, Hellenic Pulmonary Society, Member of "Sotiria" Hospital Scientific Committee, Director of the Medical Faculty at "Sotiria" Hospital, Director of the Asthma Center in Sotiria Hospital, **Greece** 

Assist. Prof. Spyros Papageorgiou, Department of Biomedical Sciences, University of West Attica, Athens, Greece

**Prof. Evangelia Protopapa**, Professor Emeritus at University of West Attica, Laboratory of Chemistry-Biochemistry-Cosmetology, Department of Biomedical Sciences, University of West Attica, **Greece** 

**Prof. Zoe Roupa MD, RN, HVN, PhD**, Coordinator of Doctoral Program in Nursing, School of Life and Health Sciences, Department of Health Sciences, University of Nicosia, Nicosia, **Cyprus** 

Prof. Vasiliki Sakellari, Department in Physiotherapy at University of West Attica, Greece

Assist. Prof. Nikolaos D. Thalassinos, Department of Biomedical Sciences, University of West Attica (UniWA), Greece

**Dr. Talia Tsivitanidou-Kakourou**, Pediatric dermatology consultant at the First Pediatric Clinic of the University of Athens "Agia Sophia" children's Hospital, **Greece** 

**Prof. Panagiotis Tsikouras**, Obstetrician and Gynecologist, Democritus University of Thrace, Greece, Director of Laboratory Family Planning Center and Gynecological Cytology, Democritus University of Thrace, **Greece** 

**Prof. Maria Mironidou-Tzouveleki**, Anaesthesiologist, Professor of Pharmacology, Medical School, Aristotle University of Thessaloniki, **Greece** 

**Prof. Athanasia Varvaresou**, Division of Aesthetics & Cosmetic Science, Department of Biomedical Sciences, University of West Attica, **Greece** 

**Prof. Maria S. Venetikou**, Professor of Pathophysiology and Nosology (Medicine), Department of Biomedical Sciences, University of West Attica (UNIWA), **Greece** 

**PhDc Elias Vossos**, Theoretical Physics, Cosmology, Mathematical Physics, Core Department, National and Kapodistrian University of Athens, **Greece** 

PhDc Spyridon Vossos, Chemistry, Theoretical Physics, Cosmology, Mathematical Physics, Core Department, National and Kapodistrian University of Athens, Greece Prof. Stefanos Zervoudis, BreastUnit Zervoudis, Chief of greekfrench breast unit in Rea Hospital at Rea Maternity Hospital, President of Mansmed (France & Greece), Department of Midwifery, University of West Attica, Greece

**Dr Apostolos Zarros**, Physician, MRes, PhD, PhD, FIBMS, Honorary Research Fellow, University of Glasgow, **UK**, Visiting Professor, University of Babylon, **Iraq** 

#### STRATEGIC ADVISOR

George Tsitouras, MEng, MSc. Strategy & Transformation Director, Change Autonomics Ltd, UK

## **GENERAL INFORMATION**

The Journal aims to promote optimum drug therapy by providing original papers and review articles covering important aspects of clinical and applied Pharmacology and Therapeutics. The focus of the Journal comprises drug evaluation reviews, which provide a detailed focus on different properties, i.e. dosage, toxicology, drugs interactions and a place in therapy of both newer and established drugs. Other Review Articles offer state-of-the-art literature surveys covering broader topics. Practical Therapeutics Articles and Leading Articles provide recommendations for specific situations of connections or emerging areas, respectively.

The Journal publishes: Original papers/ Research Articles/ Review articles/ Case studies/ Clinical studies/ Literature reviews/ Statistical studies.

The Journal publishes, in special issues, papers presented at:

- the Conferences with International Participation Medicinal Chemistry: Drug Discovery and Design organized by the Departments of Chemistry and Pharmacy of the University of Patras, Hellas
- the Panhellenic Congresses of Pharmacology organized by the Hellenic Society of Pharmacology
- the PanHellenic Congress of Aesthetics and Cosmetology (Cosmoestetica)
- the Proceedings of the 1<sup>st</sup> Greek Scientific Society of Cosmetology Conference
- the Proceedings of the 1<sup>st</sup> International Babylon Conference on Clinical and Experimental Pharmacological Research

The *scientific standard* of the papers, which are accepted for publication, is controlled by the Editorial Board or by other Experts in the various fields of Pharmacology, Pharmacokinetics and Therapeutics and Medicine.

#### **INSTRUCTIONS TO AUTHORS**

English is the preferred language for all papers. However, papers in French, can also be submitted, provided they are accompanied by an English summary. Drugs must be referred to by their generic or chemical name but may be identified by trade name in parenthesis or footnote.

The journal requires that all authors / co-authors have an ORCID (a unique researcher identifier) at the time of publication.

All papers should be submitted to the Editor-in-Chief (Dr Eleni S. Plessa) via e-mail. The following format should be used for the Manuscripts:

On the first page, the Title, Author(s) and the Name of the Institution at which the work was done, the complete address of the author, including Postal area code number, should be given under the rubric Corresponding author and the Type of Article (e.g. original paper, review paper, case report).

Articles should follow the general form:

Abstract, Introduction, Materials and Methods, Results Discussion, Acknowledgements, Fund, Conflicts of Interest, References.

Keywords: A list of key words should be submitted after Abstract.

Abstract: An Abstract in English (maximum length 250 words) must accompany all manuscripts

*References*: These should be numbered in the paper and listed under References in order of their appearance in the text. The author(s) surname followed by the initials should be given first, then the complete title of the article, the name of the Journal or Magazine (abbreviated according to the Index Medicus), the volume number, page numbers and year of publication in parenthesis.

**COPYRIGHT**: Review of Clinical Pharmacology and Pharmacokinetics - International Edition is an open access journal which publishes open access articles distributed under the terms and conditions of the <u>Creative</u> <u>Commons Attribution</u> (CC BY) License which permits use, distribution and reproduction in any medium provided the original work is properly cited. The copyright is retained by the author under the terms and conditions of the Creative Commons Attribution License.

# Issue Devoted to Papers Presented at the

# 1<sup>st</sup> Conference of the Hellenic Scientific Society of Aesthetics

December 2-3, 2023

University of West Attica, Athens, Greece

# SCIENTIFIC COMMITTEE

### PRESIDENT

Kefala Vasiliki, Pharmacist, Aesthetician and Cosmetologist, Professor, Sector of Aesthetics and Cosmetology, Department of Biomedical Sciences, Dean of the School of Health and Care Sciences, University of West Attica

### VICE PRESIDENT

**Grech Ioanna**, Aesthetician and Cosmetologist, Asst. Professor, Sector of Aesthetics and Cosmetology, Department of Biomedical Sciences, School of Health and Care Sciences, University of West Attica

### **MEMBERS**

Rallis Efstathios, Doctor, Dermatologist-Venereologist, Asst. Professor, Sector of Aesthetics and Cosmetology, Department of Biomedical Sciences, School of Health and Care Sciences, University of West Attica Tertipi Niki, Lecturer Ph. Ed., Sector of Aesthetics and Cosmetology, Department of Biomedical Sciences, School of Health and Care Sciences, University of West Attica

Sfyri Eleni, Lecturer Ph. Ed., Sector of Aesthetics and Cosmetology, Department of Biomedical Sciences, School of Health and Care Sciences, University of West Attica

Andreou Eleni, Aesthetician and Cosmetologist, Associate, Sector of Aesthetics and Cosmetology, Department of Biomedical Sciences, School of Health and Care Sciences, University of West Attica

**Biskanaki Foteini**, Aesthetician and Cosmetologist, Associate, Sector of Aesthetics and Cosmetology, Department of Biomedical Sciences, School of Health and Care Sciences, University of West Attica

# Letter from the Guest Editor

Honourable colleagues, ladies and gentlemen, dear students,

it is with great pleasure that we welcome you to the 1st Conference of the Hellenic Scientific Society of Aesthetics, believing and expecting an inductive and pleasant two-day conference.

The establishment of the EEEA in October 2022, was a demand of many years.

It was a bet for me and the founding members of EEEA that came to fill the existed gap between Aesthetics and Scientific community.

As EEEA president, I want to thank the society's founding members and the Board of Directors and to declare that we all worked together tirelessly, coordinated, reliably and impartially, guided by ethics as well as our academic and professional knowledge.

Today, 45 years after the Department of Aesthetics establishment, through developments, changes and educational reforms, Aesthetics is, together with Cosmetology, a direction of the Department of Biomedical Sciences of School of Health and Care Sciences of University of West Attica.

Today, therefore, 45 years later, the 1st Conference of the Hellenic Scientific Society of Aesthetics is organized and held. The chosen place of 1st EEEA conference, as well as, the physical presence is semiological, because:

- We wanted you to come back and visit the birthplace of the 1st Department of Aesthetics in Greece which was founded in 1978 and
- We wanted to honour the place that, many of us serve through many and varied academic and administrative positions.

It is very gratifying to watch the impressive progress of Aesthetics year after year, the development at dizzying rates, the enrichment with new products and new cutting-edge technologies so that aestheticians have the supplies, skill and knowledge to help their clients as never before. To be able to offer them reliable, scientifically acceptable and above all safe and institutionally legal solutions, in most of the problems they are called to face during their profession practice.

Your honourable presence and active participation in the conference works will undoubtedly satisfy our expectations and we are sure that it will contribute the most to its success.

A special contribution to conference's goals has the presence of eminent colleagues, to whom I especially thank.

I would like to warmly thank the sponsoring companies who contributed catalytical to its accomplishment, as well as all the delegates.

We hope that the round table discussions along with the invited lectures, included in this abstract book, will raise new and intriguing questions that will further stimulate research, and will contribute to new approaches and attitudes.

I would like to thank *Review of Clinical Pharmacology and Pharmacokinetics*' Editor-in-Chief Dr Eleni S. Plessa in particular for invitation and for providing the suitable and high-standard forum through which new research findings will become available to the scientific community.

Guest Editor

Professor Vasiliki K. Kefala University of West Attica Aesthetician – Cosmetologist and Pharmacist President of the Hellenic Scientific Society of Aesthetics President of the Organizing and Scientific Committee

# CONTENTS

Skin whitening as an aesthetic procedure for the treatment of facial dyschromia Adamtziliadis E., Rallis E., Tertipi N., Sfyri E., Andreou E., Biskanaki F., Kefala V	7
Permanent Make Up-PMU Colorants and Regulations Andreou E., Rallis E., Sfyri E., Tertipi N., Biskanaki F, Kefala V	13
Laser Innovations in Aesthetics Biskanaki F., Rallis E., Andreou E., Sfyri E., Tertipi N., Ninos G., KefalaV	17
Isotretinoin and psychiatric adverse effects: A literature review Lotsaris K., Grech V.S., Grech I., Kefala V., Rallis E	23
Semaglutide (Ozempic) and obesity. A comprehensive guide for aestheticians Grech V.S., Lotsaris K., Grech I., Kefala V., Rallis E	31
Comparative study of Cavitation and Extracorporeal Shock Wave Therapy Karydi M.R., Kefala V., Rallis E., Biskanaki F	37
Newer developments in the treatment of aesthetic lesions caused by excessive exposure the skin to blue light <i>Koldiri E., Rallis E., Kefala V.</i>	
Development of a proposed Laser Safety Protocol (LSP) for the prevention of eye and ski hazards in Biomedical Laser facilities Ninos G., Kefala V., Biskanaki F., Chaniotis D., Tertipi N., Sfyri E., Andreou E., Rallis E	
hazards in Biomedical Laser facilities	51
<ul> <li>hazards in Biomedical Laser facilities</li> <li>Ninos G., Kefala V., Biskanaki F., Chaniotis D., Tertipi N., Sfyri E., Andreou E., Rallis E</li> <li>New developments in the treatment of aesthetic problems with electroporation</li> </ul>	51 57
<ul> <li>hazards in Biomedical Laser facilities</li> <li><i>Ninos G., Kefala V., Biskanaki F., Chaniotis D., Tertipi N., Sfyri E., Andreou E., Rallis E.</i></li> <li>New developments in the treatment of aesthetic problems with electroporation</li> <li><i>Theodoropoulou K., Rallis E., Kefala V.</i></li> <li>In vitro skin models. Challenges and Future Steps</li> </ul>	51 57 63
<ul> <li>hazards in Biomedical Laser facilities</li> <li><i>Ninos G., Kefala V., Biskanaki F., Chaniotis D., Tertipi N., Sfyri E., Andreou E., Rallis E.</i></li> <li>New developments in the treatment of aesthetic problems with electroporation</li> <li><i>Theodoropoulou K., Rallis E., Kefala V.</i></li> <li>In vitro skin models. Challenges and Future Steps</li> <li><i>Letsiou S., Beloukas A., Rallis E., Kefala V.</i></li> <li>The effect of exercise on the quality of the skin</li> </ul>	51 57 63 67
<ul> <li>hazards in Biomedical Laser facilities</li> <li><i>Ninos G., Kefala V., Biskanaki F., Chaniotis D., Tertipi N., Sfyri E., Andreou E., Rallis E.</i></li> <li>New developments in the treatment of aesthetic problems with electroporation</li> <li><i>Theodoropoulou K., Rallis E., Kefala V.</i></li> <li>In vitro skin models. Challenges and Future Steps</li> <li><i>Letsiou S., Beloukas A., Rallis E., Kefala V.</i></li> <li>The effect of exercise on the quality of the skin</li> <li><i>Tertipi N., Styri E., Kefala V., Biskanaki F., Andreou E., Chaniotis D., Rallis E.</i></li> <li>Applications and effects of «Cold Atmospheric Plasma» in Aesthetics</li> </ul>	51 63 67 71