THERAPEUTIC ADVANCES in *Drug Safety*

13th APLF Annual Conference, 18-19 October 2025, Aveiro, Portugal
Programme and selected Abstracts

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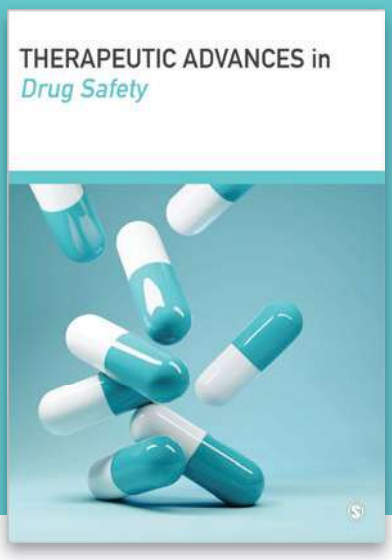

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Published under a continuous online publication model, one volume per year, by Sage.

Sage Publications Ltd., 1 Oliver's Yard, 55 City Road, London EC1Y 1SP, UK
Tel: +44 (0)20 7324 8500

Website: journals.sagepub.com/home/taw

Cover design
Falling antibiotics healtcare background (Getty Images).

Print ISSN: 2042-0986
Online ISSN: 2042-0994

Sage is a member of CrossRef.

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Aims and Scope:

Therapeutic Advances in Drug Safety delivers the highest quality peer-reviewed open access original research articles, reviews, and scholarly comment on pioneering efforts and innovative studies pertaining to the safe use of drugs in patients. The journal has a strong clinical and pharmacological focus and is aimed at an international audience of clinicians and researchers in drug safety, providing an online forum for rapid dissemination of recent research and perspectives in this area.

The journal is dedicated to publishing clinical research. We do not publish preclinical research, including basic laboratory research and animal studies.

Therapeutic Advances in Drug Safety adheres to a single-anonymous peer review process in which the reviewer's name is routinely withheld from the author unless the reviewer requests a preference for their identity to be revealed. Each research article and review manuscript is reviewed by at least two referees.

1. The purpose of the Journal is to publish (in the English language) articles, reviews and scholarly comment (judged worthy of publication by appropriate specialists and accepted by the Editor) relating to medical oncology. The Journal is for all professionals and is a forum for all views on related subjects. The editorial board welcomes articles of current interest on original research, reviews and clinical studies.
2. The Journal will be international in the sense that it will seek, wherever possible, to publish material from authors with an international reputation and articles that are of interest to an international audience.
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   (ii) avoid bias in favour of the interests of particular schools or directions of research or particular political or narrow disciplinary objectives to the exclusion of others;
   (iii) ensure that articles are written in a terminology and style which makes them intelligible, not merely within the context of a particular discipline or abstract mode, but across the domain of relevant disciplines.

THERAPEUTIC ADVANCES in *Drug Safety*

13th APLF Annual Conference, 18-19 October 2025, Aveiro, Portugal - Programme and selected Abstracts

Ther Adv Drug Saf

2025, Vol. 16: 5–71

DOI: 10.1177/20420986251379201

Dear participants,

The XIII National Conference, organized by the Portuguese Association of Pharmacy Technicians (APLF), reinforces the commitment to fostering scientific exchange and discussion among Pharmacy Technicians, bringing together professionals, students, academia, and the professional association. Held on 18–19 October 2025 at Aveiro, this year's conference embraces the central theme "Medication Safety", addressing one of the most pressing priorities in healthcare today. The event gathers renowned national and international speakers, ensuring a multidisciplinary and up-to-date approach to the safe and effective use of medicines and health technologies. The scientific programme includes lectures, workshops, debates, and scientific presentations, covering the diverse areas of professional practice and offering a platform for the sharing of innovative ideas, best practices, and research outcomes.

A record-breaking 92 abstracts were submitted for this edition — the highest number ever in the history of the institution, now published in the Therapeutic Advances in Drug Safety, marking a unique contribution to scientific dissemination in the field.

Our thanks go to all participants, to the members of the Organizing and Scientific Committees — composed of dedicated professionals from across the country — and to all authors who have actively contributed by sharing their research and practical experiences, thereby promoting both professional growth and the advancement of the profession.

We hope this conference proves to be a fruitful opportunity for knowledge exchange and networking, and we look forward to continuing this journey of excellence together.

Jorge Balteiro
President of the Organizing Committee of XIII National Conference of APLF

Rui Cruz
President of the Scientific Committee of XIII National Conference of APLF

Cristiano Matos
President of the Portuguese Association of Pharmacy Technicians

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Programme

Day 1 – 18th October, 2025

09:30 – Opening Ceremony

Cristiano Matos (President of APLF)

Jorge Balteiro (President of the Organizing Committee, XIII National Conference)

Rui Cruz (President of the Scientific Committee, XIII National Conference)

10:00 - Inaugural Conference: *"Medication Safety: From Approval to Use"*

Moderator: Sofia Antunes (Senior Specialist in Pharmacovigilance, PharmaLex Portugal, LDA, Portugal)

- *"Medicinal Product Lifecycle: Safety and Risk Management"*– Maria Teresa Herdeiro (Associate Professor with Habilitation, Department of Medical Sciences, University of Aveiro, Portugal) – **CONFERENCE-01**
- *"Medicinal product lifecycle: Regulatory and Quality Management"* - André Luz (OWLTECH – Manager and Qualified Person, Portugal) – **CONFERENCE-02**

11:30 – Panel I: *"Medicines in Society and Sport: The Thin Line Between Use and Misuse"*

Moderator: Luís Fonseca (Judicial Police, Forensic Science Laboratory – Drugs and Toxic Unit, Portugal)

- *"The Medicalisation of Everyday Life and the Trivialisation of Risk: The Trajectory of Addiction"* - Graça Vilar (Director, Department of Integrated Intervention, Institute for Addictive Behaviours and Dependencies, I.P., Portugal) – **CONFERENCE-03**
- *"Illicit and Inappropriate Use of Medicines in Portugal: The Current Landscape"* - Sara Tábuas (Forensic Science Specialist, Drugs and Toxic Sector of the Forensic Science Laboratory, Judicial Police, Portugal) – **CONFERENCE-04**
- *"Use of Performance-Enhancing Substances: Factors and Prevalence among Fitness Enthusiasts in Portugal"* - Ana Sofia Tavares (Escola Superior de Tecnologia da Saúde de Lisboa, Instituto Politécnico de Lisboa, Lisboa, Portugal) – **CONFERENCE-05**

14:30 – Panel II: *"Antibiotics: Strategies for Safe and Efficient Use"*

Moderator: Cláudia Nazareth (Clinical Director for Hospital Healthcare, Local Health Unit of Coimbra)

- *"Antimicrobial stewardship: data-driven behaviour change in proximity"* - Francisco Almeida (Infection Prevention and Control and Antimicrobial Resistance Unit – UPCIRA, Local Health Unit São João, Portugal) – **CONFERENCE-06**
- *"Multifaceted interventions to improve antibiotic use - One Health approach"* - Fátima Roque (ESS/IPG; BRIDGES – Biotechnology Research, Innovation and Design for Health Products, Portugal) – **CONFERENCE-07**
- "Rational Use of Antibiotics and the Challenges of Antimicrobial Resistance" - André Peralta Santos (Deputy Director General of Health - DGS - Portugal)

16:30 – Panel III: ***"Artificial Intelligence in Medication Safety and its Impact on the Future of the Profession: Challenges and Opportunities"***

Moderator: Fábio Urbano Soares (Edol Laboratories, Portugal; Seeha, United Arab Emirates)

- *"Localized AI in Hospital Pharmacy: Medex and Smart Distribution"* - António Fonseca (Local Health Unit of Vila Nova de Gaia/Espinho, Portugal) – **CONFERENCE-08**
- *"Artificial Intelligence in Hospital Pharmacy: Revolution or Complement?"* - José Miguel Mesquita (Senior Manager, Strategy Unit, Glintt Life Hospitals, Portugal) – **CONFERENCE-09**
- *"Pharmaceutical AI and Care Delivery: Reality or Promise?"* - Filipa Fixe (Healthcare Director, KPMG; Visiting Professor, Institute of Social and Political Sciences, University of Lisbon, Portugal)
- *"Ideas and Opportunities for Clinical Trials management systems in the age of AI"* - Rui Patricio (Universidade of Aveiro, Aveiro, Portugal) – **CONFERENCE-10**

18:00 – Cultural Moment

Day 2 – 19th October, 2025

09:00 – Oral Communications *(choice from Scientific Committee)*

11:00 – Panel IV: ***"Deprescribing: Less is More"***

Moderator: Carla Perpétuo (Local Health Unit of Guarda; BRIDGES – Biotechnology Research, Innovation and Design for Health Products, Polytechnic Institute of Guarda, Portugal)

- *"Optimizing Medication Use in Elderly Patients: A Framework for Deprescribing and Rational Prescribing"* - Luís Monteiro (Coordinator, USF Esgueira +; Full Professor, Department of Medical Sciences, University of Aveiro; Researcher, Egas Moniz Academic and Clinical Centre, Portugal) – **CONFERENCE-11**
- *"A Multifaceted Intervention to Reduce Potentially Inappropriate Medication in Older Adults"* - Daniela Rodrigues (BRIDGES – Biotechnology Research, Innovation and Design for Health Products, Polytechnic Institute of Guarda, Portugal) – **CONFERENCE-12**
- *"Deprescribing in Portugal: Perspectives of Physicians and Older Patients"* - Anabela Pereira (RISE-Health, Associated Laboratory, Portugal) – **CONFERENCE-13**

12:30 – Closing Ceremony and Awards Presentation

Cristiano Matos (President of APLF)

Jorge Balteiro (President of the Organizing Committee, XIII National Conference)

References

1. Filho, A. M., et al. (2025). The GLOBOCAN 2022 cancer estimates: Data sources, methods, and a snapshot of the cancer burden worldwide. International Journal of Cancer, 156(7), 1336–1346.
2. Bax, C., Taverna, G., Eusebio, L., Sironi, S., Grizzi, F., Guazzoni, G., & Capelli, L. (2018). Innovative diagnostic methods for early prostate cancer detection through urine analysis: A review. Cancers, 10(4), 1–29.
3. Lima, A. R., Pinto, J., Amaro, F., Bastos, M. de L., Carvalho, M., & Guedes De Pinho, P. (2021). Advances and perspectives in prostate cancer biomarker discovery in the last 5 years through tissue and urine metabolomics. Metabolites, 11(3), 181–209.

Abstract-Post-33 Personalized Medicine

Neurocognitive Development In Children With Maple Syrup Urine Disease

Diana Carrasco[1], Susana Sequeira[1,2]

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Background: Maple syrup urine disease is a rare hereditary metabolic disease caused by a deficiency in the activity of the branched-chain alpha-keto acid dehydrogenase complex. This deficiency prevents the breakdown of branched-chain amino acids (leucine, isoleucine and valine), which leads to the toxic accumulation of these amino acids and their respective ketoacids. If not treated quickly, the condition can lead to acute encephalopathy and severe neurological sequelae. **Objectives:** To assess the intellectual outcome of children affected by leucinosis, by analysing various studies. **Methods:** A systematic review was carried out. Studies were collected from the PubMed and Web of Science databases, published between 1991 and 2025, which presented results of the intellectual impact on affected children. Five articles were included. **Results:** The studies analysed show that there is a strong relationship between high leucine levels and intelligence quotient, high values of leucine being associated with lower cognitive performance (median IQ=57). Early diagnosis, through neonatal screening, and prompt treatment have been shown to be decisive for better intellectual outcomes. Episodes of metabolic decompensation and poor adherence to treatment are related to greater neurocognitive damage, while adherence to diet and continuous monitoring have been shown to be protective factors. Even with adequate treatment, many children show alterations in neurocognitive development. **Conclusions:** It is essential to understand the impact of this disease on the intellectual performance of these children, in order to better target them therapeutically, educationally and socially.

Keywords: Children, Leucine, Intellectual Outcome.

References

1. Bouchereau, J. et al. (2017). Neurocognitive profiles in MSUD school-age patients. *Journal of Inherited Metabolic Disease*, *40*(3), 377–383.
2. Hoffmann, B., Helbling, C., Schadewaldt, P., & Wendel, U. (2006). Impact of Longitudinal Plasma Leucine Levels on the Intellectual Outcome in Patients with Classic MSUD. *Pediatric Research 2006 59:1*, *59*(1), 17–20.
3. Kaplan, P. et al. (1991). Intellectual outcome in children with maple syrup urine disease. *The Journal of Pediatrics*, *119*(1), 46–50.

Abstract-Post-39 Personalized Medicine

The use of nanopharmaceuticals in the treatment of neoplasms - a review

Cateline Cruz[1], Cristiana Midões[2], Luís Nascimento[3]

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Background: Cancer is defined by the uncontrolled growth of cells, primarily driven by genetic mutations. Traditional treatments such as surgery, radiotherapy, and chemotherapy frequently fall short due to issues of non-specific targeting and systemic toxicity [1,2]. However, nanotechnology has decisively emerged as a vital solution to these problems. Nanopharmaceuticals are rigorously formulated, nanoscale pharmaceutical products that have received regulatory approval, while nanoparticle-based therapies represent a broader range of experimental applications [3].

Objectives: This review aims to assertively evaluate the relevance and effectiveness of nanopharmaceuticals in treating neoplasms based on solid scientific evidence. **Methods**: A systematic review was conducted, leveraging PubMed, MeSH Browser, SciELO, and Web of Science, focusing exclusively on articles published between January 2012 and October 2022 that pertain to nanotherapy for cancer. Studies addressing nanopharmaceuticals in non-cancer conditions or solely concentrating on conventional cancer treatments were rigorously excluded. **Results:** The analysis of ten selected articles demonstrates that nanoparticle-based therapies provide significant advantages over conventional treatments. These include enhanced intracellular uptake, improved biodistribution, and heightened drug accumulation at tumor sites. Notable nanopharmaceuticals such as SGT-94, BCc1, nab-paclitaxel, and others displayed superior pharmacokinetics and targeted delivery while minimizing systemic toxicity. The majority of studies reported robust safety profiles with manageable side effects and no serious toxicity. **Conclusion:** Nanomedicine represents a groundbreaking strategy for advancing cancer treatment by enhancing therapeutic precision and reducing adverse side effects. The compelling evidence firmly supports the expanding role of nanopharmaceuticals in oncology. It is imperative that further clinical studies validate their long-term efficacy and safety across larger populations.

Keywords: Nanoparticles, Antineoplastic Agents, Drug Delivery Systems

References

1. Gómez-Gallego, D. M., Urcuqui-Inchima, S., & Hernández, J. C. (2016). Efecto inmunomodulador de nanopartículas usadas en nanomedicina. *IATREIA, 29*(4), 445–457.
2. Irvine, D. J., & Dane, E. L. (2020). Enhancing cancer immunotherapy with nanomedicine. *Nature Reviews Immunology, 20*(5), 321–334.
3. Petrovic, S., Bita, B., & Barbinta-Patrascu, M.E. (2024). *Nanoformulations in pharmaceutical and biomedical applications: Green perspectives. International Journal of Molecular Sciences, 25*(11), 5842.

Abstract-Post-43 Personalized Medicine

ANTI-VEGF therapies in neovascular age-related macular degeneration: a scoping review of functional and morphological outcomes in older adults

Marta Queirós[1], Daniela Teixeira[1], Ângelo Jesus[2], Marlene Santos[2,3], Fernando Moreira[2], Sara R. Fernandes[1,4]

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Background: Age-related macular degeneration (AMD) is one of the leading causes of blindness in individuals over 60 years of age and is classified into two main subtypes: geographic atrophy (dry AMD) and neovascular AMD (wet AMD). Anti-vascular endothelial growth factor (anti-VEGF) agents are the standard treatment for neovascular AMD, although guidelines diverge regarding first-line choices [1,2]. **Objectives:** This scoping review aims to identify and characterize current scientific evidence on the use of anti-VEGF agents in the treatment of neovascular AMD. **Methods:** A systematic search was conducted in PubMed for observational or experimental studies published between 2020 and April 2025. Eligible studies included individuals aged ⩾60 years, reported on the use of anti-VEGF therapy for neovascular AMD, and assessed both functional (visual acuity) and morphological outcomes. **Results:** Sixty-five studies met the inclusion criteria – 56 observational studies (prospective cohorts and cross-sectional designs), and nine clinical trials. Aflibercept (34%), faricimab (18%), and ranibizumab (15%) were the most commonly agents. Ranibizumab and aflibercept consistently improved visual acuity, with average gains of 7–15 ETDRS letters. Bevacizumab yielded more variable outcomes. In refractory patients, brolucizumab or faricimab showed anatomical improvements; however, brolucizumab was associated to higher risk of intraocular inflammation. **Conclusions:** The findings suggest that clinical and anatomical factors, such as persistent