THERAPEUTIC ADVANCES in *Drug Safety*

# Contents

Volume 16 Issue S1 October 2025

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



THERAPEUTIC ADVANCES in *Drug Safety*

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



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

Sage is a member of CrossRef.

COPE COMMITTEE ON PUBLICATION ETHICS

**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]*

[1]Escola Superior de Saúde do Instituto Politécnico do Porto, Porto, Portugal.[2]LAQV/REQUIMTE, Escola Superior de Saúde, Instituto Politécnico do Porto, Porto, Portugal.[3]Molecular Oncology & Viral Pathology, IPO-Porto Research Center (CI-IPOP), Portuguese Institute of Oncology, Porto, Portugal.[4]LAQV, REQUIMTE, Departamento de Ciências Químicas, Faculdade de Farmácia, Universidade do Porto, Porto, Portugal. Corresponding author: Daniela Teixeira - 10240033@ess.ipp.pt

**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

subretinal fluid, central retinal thickness, and initial treatment response, may help guide a more individualised selection of anti-VEGF. While ranibizumab and aflibercept remain well-established options, faricimab shows potential, in patients with suboptimal response to conventional agents.

***Keywords:*** Anti-VEGF, Neovascular age-related macular degeneration, Visual acuity outcomes.

## References

1. Ma, H., et al. (2023). Anti-VEGF Drugs in Age-Related Macular Degeneration: A Focus on Dosing Regimen-Related Safety and Efficacy. Drugs & Aging, 40(11), 991–1007.
2. Servillo, A., et al. (2023). The state-of-the-art pharmacotherapeutic management of neovascular age-related macular degeneration. Expert Opinion on Pharmacotherapy, 24(2), 197–206.

## Abstract-Post-50 Personalized Medicine

### *Phage Therapy In Hospitals: A New Hope Against Antimicrobial Resistance*

*Sofia Vieira[1], Cláudia Marques[1], Marlene Ferreira[1], Vanessa Almeida[1], Vânia Oliveira[1]*

[1]Unidade Local de Saúde de Entre Douro e Vouga, Santa Maria da Feira, Portugal. Corresponding author: Sofia Vieira - nvieira.sofia@gmail.com

**Background:** The global antimicrobial resistance crisis has created an urgent need for alternative therapies. Phage therapy — using bacteriophages that target and lyse bacteria — has re-emerged as a promising option for treating multidrug-resistant and complex infections. Unlike broad-spectrum antibiotics, phages offer a precise mechanism with less impact on beneficial microbiota. Their non-standardized production classifies them as magistral preparations under EU and national legislation. **Objectives:** This work aims to clarify the role of phage therapy as a clinical alternative to conventional antibiotics and describe the conditions for its preparation as a compounded medicine within hospital pharmacy services in Portugal, aligned with current regulatory frameworks. **Methods:** A literature review was conducted (2015–2024) using PubMed and Web of Science, focusing on clinical use, regulatory developments, and compounding methods in hospital pharmacy. Regulatory texts included Portuguese INFARMED Deliberation No. 112/CD/2024, the European Pharmacopoeia (5.31), and the Belgian National Monograph. A clinical case was analysed to illustrate phage therapy implementation in a Portuguese hospital, highlighting compounding, interdisciplinary collaboration, and outcomes. **Results:** The literature supports the safety and growing efficacy of phage therapy for complex infections. Portuguese INFARMED Deliberation No. 112/CD/2024 defines the regulatory framework for magistral bacteriophage preparation. Phages may be prepared from well-characterized stocks in sterile conditions. Ethical approval may depend on institutional context. A clinical case of *Mycobacterium abscessus* pulmonary infection showed improvement and tolerance, confirming feasibility. **Conclusions**: Successful implementation depends on strict adherence to national compounding guidelines. This structured approach supports safe integration into clinical practice as a timely alternative to antibiotics.

***Keywords:*** Phage Therapy, Hospital Pharmacy, Compounded Medicines, Antimicrobial Resistance

## References

1. Jalili, M., Ansari, N., Bakhtiari, S., & Jalilian, F. A. (2021). Phage therapy in the treatment of infectious diseases: An overview. Current Drug Therapy, 16(2), 120–128.
2. Maimaiti, Z., Li, Z., Xu, C., Chen, J., & Chai, W. (2023). Global trends and hotspots of phage therapy for bacterial infection: A bibliometric visualized analysis from 2001 to 2021. Frontiers in Microbiology, 13, 1067803.
3. Willy, C. et al. (2023). Phage therapy in Germany—Update 2023. Viruses, 15(2), 588.

## Abstract-Post-60 Personalized Medicine

### *Vitamin D Supplements In The Prevention and/or Treatment Of Breast Cancer: Review Of The Literature*

*Beatriz Marques[1], João Lima[1], Clara Rocha[1], Jorge Balteiro[1]*

[1]ESTeSC-Coimbra Health School, IPC, Coimbra, Portugal. Corresponding author: Beatriz Marques - beatrizmarques09@hotmail.com

**Background:** The breast is one of the organs most affected by cancer, making it among the