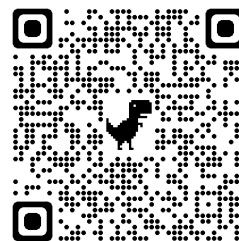


CURRENT RESEARCH TOPICS IN PHARMACY:

An Overview of Novelties in Cancer Treatment

February 15th, 2024



FIRST SESSION

10:00-11:30 AM

Moderator:

*Betül
OKUYAN*

Welcome

Prof.Hatice Kübra ELÇİOĞLU

*Natural products mediated targeting
of deregulated signaling pathways for
chemoprevention of carcinogenesis
and metastasis*

Prof. Ahmed Ammad Farooqi

Mesoporous silica nanoparticles: A
smart tool for biomedical applications
Assoc.Prof.Fahima Dilnawaz

Phytosomes: A Dynamic Innovation in
Cancer Treatment
Assist. Prof. Dhanashree Sanap

SECOND SESSION

13:00-14:30 PM

Moderator:

*Ceyda EKENTOK
ATICI*

Increased awareness of sex and
gender as modulators of cancer risk
and outcome is required among
cancer researchers

Assoc.Prof.Berna Özdemir

*Management of oral chemotherapy-
related problems in cancer patients*
Pharmacist Elif Aras Atik

Cervical Cancer Treatment and HPV
Vaccination: Preventive Priority for
Future Generations

Assist. Prof. Sneha Agrawal

THIRD SESSION

15:30-17:00 PM

Moderator:

Esra TATAR

Exploring new drug delivery avenues
for targeted and localized cancer
therapy through advanced
nanotherapeutics
Assist.Prof.Monika Dwivedi

Plectranthus: A Valuable Source of
Bioactive Compounds for Therapeutic
Applications

Assoc.Prof.Patricia Rijo

Targeted delivery of ligand-displaying
exosomes using RNA
nanotechnology for breast cancer
Dr.Burcu Üner

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PHYTOSOMES: A DYNAMIC INNOVATION IN CANCER TREATMENT

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Phytosomes present a promising avenue for revolutionizing the administration of herbal medications, particularly in the context of cancer treatment. This innovative approach involves enhancing the absorption and creating a unique dosage form for plant extracts through the incorporation of phosphatidylcholine. In contrast to pharmaceuticals derived from synthetic compounds, phytosomal systems hold significant potential for elevating therapeutic efficacy while concurrently mitigating adverse effects, making them particularly relevant in cancer therapy. Within the realm of phytotherapy, the focal points lie in the production and utilization of phytosomes as advanced delivery systems for cancer treatment. Critical evaluation factors such as particle size, zeta potential, and entrapment efficiency play a pivotal role in determining the effectiveness of phytosomal formulations. Thorough assessments of these parameters are essential to ensure the optimal quality and efficacy of phytosomal formulations specifically tailored for cancer treatment. Future applications of phytosomal delivery techniques in cancer treatment exhibit substantial market potential. This is particularly noteworthy given the growing preference for natural remedies over conventional options in the realm of oncology. Phytosomes have the potential to emerge as a groundbreaking approach in cancer therapy, offering enhanced therapeutic outcomes with minimized side effects, aligning with the evolving landscape of holistic and natural treatment preferences in the medical community.

Keywords: Phytosomes; herbal medicines; cancer treatment.

References

- [1] Gaikwad SS, Morade YY, Kothule AM, Kshirsagar SJ, Laddha UD, Salunkhe KS. Overview of phytosomes in treating cancer: advancement, challenges, and future outlook. *Heliyon*. 2023; 9(6):e16561. <https://doi.org/10.1016/j.heliyon.2023.e16561>.
- [2] Komeil IA, Abdallah OY, El-Refaie WM. Surface modified genisteinphytosome for breast cancer treatment: *In-vitro* appraisal, pharmacokinetics, and *in-vivo* antitumor efficacy. *Eur J Pharm Sci*. 2022; 179:106297. <https://doi.org/10.1016/j.ejps.2022.106297>.
- [3] Komeil IA, Gowayed MA, El-Ganainy SO, El Achy SN, Huttunen KM, Abdallah OY. Oral genistein-loaded phytosomes with enhanced hepatic uptake, residence and improved therapeutic efficacy against hepatocellular carcinoma. *Int J Pharm*. 2021; 601: 120564. <https://doi.org/10.1016/j.ijpharm.2021.120564>.
- [4] Padmakumari P, Manda RM. Design, formulation, biopharmaceutical evaluation and *in-vitro* screening of boldinephytosomes for breast cancer therapy. *Materials Today: Proceedings*. 2023. <https://doi.org/10.1016/j.matpr.2023.08.123>.
- [5] Komeil I, El Refaie W, Abdallah O. Genistein-loaded phytosomes for treatment of liver cancer via oral administration. *World Patent WO 135652*. 2022; 1-54. French.
- [6] Murugesan MP, Ratnam MV, Mengitsu Y, Kandasamy K. Evaluation of anti-cancer activity of phytosomes formulated from *Aloe vera* extract. *Materials Today: Proceedings*. 2021; 42 (2): 631-636. <https://doi.org/10.1016/j.matpr.2020.11.047>.