

Search > Results for PEGylated lipos... >

MENU

PEGylated liposomes enhance the effect of cytotoxic drug: A review

Free Full Text from Publisher

Full Text Links ▾



Export ▾

Add To Marked List

< 1 of 1 >

PEGylated liposomes enhance the effect of cytotoxic drug: A review

By: Taher, M (Taher, Muhammad) ^[1], ^[2]; Susanti, D (Susanti, Deny) ^[3]; Haris, MS (Haris, Muhammad Salahuddin) ^[1]; Rushdan, AA (Rushdan, Aina Atiqah) ^[4]; Widodo, RT (Widodo, Riyanto Teguh) ^[5]; Syukri, Y (Syukri, Yandi) ^[6]; Khotib, J (Khotib, Junaidi) ^[7]

View Web of Science ResearcherID and ORCID (provided by Clarivate)

HELIYON

Volume: 9 **Issue:** 3

Article Number: e13823

DOI: 10.1016/j.heliyon.2023.e13823

Published: MAR 2023

Early Access: FEB 2023

Indexed: 2023-04-30

Document Type: Review

Abstract:

Cancer is a second leading disease-causing death worldwide that will continuously grow as much as 70% in the next 20 years. Chemotherapy is still becoming a choice for cancer treatment despite its severity of side effects and low success rate due to ineffective delivery of the chemodrugs. Since it was introduced in 1960, significant progress has been achieved in the use of liposomes in drug delivery. The study aims to review relevant literatures on role of PEGylated liposome in enhancing cytotoxic activity of several agents. A systematic literature on the use of PEGylated liposomes in anticancer research via Scopus, Google scholar and PubMed databases was conducted for studies published from 2000 to 2022. A total of 15 articles were selected and reviewed from 312 articles identified covering a variety of anticancer treatments by using PEGylated liposomes. PEGylated liposome which is purposed to achieve steric equilibrium is one of enhanced strategies to deliver

anticancer drugs. It has been shown that some improvement of delivery and protection from a harsh gastric environment of several anticancer drugs when they are formulated in a PEGylated liposome. One of the successful drugs that has been clinically used is Doxil (R), followed by some other drugs in the pipeline. Various drugs (compounds) had been used to enhance the efficacy of PEGylated liposomes for targeted cancer cells in vitro and in vivo. In conclusion, PEGylated liposomes enhance drug activities and have great potential to become efficient anticancer delivery to follow Doxil (R) in the clinical setting.

Keywords

Author Keywords: Drug delivery; Cancer; Tumor; Nanoencapsulation; Lipid vehicle; Preparation

Keywords Plus: STERICALLY STABILIZED LIPOSOMES; IN-VIVO EVALUATION; SOLID TUMOR; DOXORUBICIN; DELIVERY; RESVERATROL; PLUMBAGIN; APOPTOSIS; EFFICACY; PHARMACOKINETICS

Author Information

Corresponding Address: Taher, Muhammad (corresponding author)

- ▼ Int Islamic Univ Malaysia, Dept Pharmaceut Technol, Kulliyah Pharm, Kuantan 25200, Pahang, Malaysia

Corresponding Address: Susanti, Deny (corresponding author)

- ▼ Int Islamic Univ Malaysia, Dept Chem, Kulliyah Sci, Kuantan 25200, Pahang, Malaysia

Corresponding Address: Khotib, Junaidi (corresponding author)

- ▼ Airlangga Univ, Fac Pharm, Dept Pharm Practice, Surabaya 60115, Indonesia

Addresses:

- ▼ ¹ Int Islamic Univ Malaysia, Dept Pharmaceut Technol, Kulliyah Pharm, Kuantan 25200, Pahang, Malaysia
- ▼ ² Int Islamic Univ Malaysia, Kulliyah Pharm, Pharmaceut & Translat Res Grp, Kuantan 25200, Pahang, Malaysia
- ▼ ³ Int Islamic Univ Malaysia, Dept Chem, Kulliyah Sci, Kuantan 25200, Pahang, Malaysia
- ▼ ⁴ Int Islamic Univ Malaysia, Dept Biomed Sci, Kulliyah Allied Hlth Sci, Kuantan 25200, Pahang, Malaysia
- ▼ ⁵ Univ Malaya, Fac Pharm, Dept Pharmaceut Technol, Kuala Lumpur 50603, Malaysia

...more addresses

E-mail Addresses: mtaher@iium.edu.my; deny@iium.edu.my; junaidi-k@ff.unair.ac.id

Categories/ Classification

Research Areas: Science & Technology - Other Topics

Web of Science Categories: Multidisciplinary Sciences

+ See more data fields

Journal information

HELIYON

eISSN: 2405-8440

Current Publisher: ELSEVIER SCI LTD, THE BOULEVARD, LANGFORD LANE,
KIDLINGTON, OXFORD OX5 1GB, OXON, ENGLAND

Research Areas: Science & Technology - Other Topics

Web of Science Categories: Multidisciplinary Sciences

3.776

**Journal
Impact
Factor™
(2021)**

0.72

**Journal
Citation
Indicator™
(2021)**

Citation Network

In Web of Science Core Collection

0
Citations

 [Create citation alert](#)

74
Cited References
[View Related
Records](#)

Use in Web of Science

Web of Science Usage Count

4 **4**
Last 180 Days Since 2013

[Learn more](#)

This record is from:
Web of Science Core Collection

- Science Citation Index Expanded (SCI-EXPANDED)

Suggest a correction

If you would like to improve the quality of the data in this record, please Suggest a correction

74 Cited References

Showing 30 of 74

[View as set of results](#)

(from Web of Science Core Collection)

© 2022
Clarivate
Training
Portal
Product
Support

Data
Correction
Privacy
Statement
Newsletter

Copyright
Notice
Cookie
Policy
Terms of
Use

Manage
cookie
preferences

Follow
Us

