

Accepted Manuscript

Nanoemulsion as a novel carrier system for improvement of betulinic acid oral bioavailability and hepatoprotective activity

Ranjit K. Harwansh, Pulok K. Mukherjee, Sayan Biswas



PII: S0167-7322(17)30325-2
DOI: doi: [10.1016/j.molliq.2017.04.051](https://doi.org/10.1016/j.molliq.2017.04.051)
Reference: MOLLIQ 7207

To appear in: *Journal of Molecular Liquids*

Received date: 24 January 2017
Revised date: 17 March 2017
Accepted date: 13 April 2017

Please cite this article as: Ranjit K. Harwansh, Pulok K. Mukherjee, Sayan Biswas , Nanoemulsion as a novel carrier system for improvement of betulinic acid oral bioavailability and hepatoprotective activity. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Molliq(2017), doi: [10.1016/j.molliq.2017.04.051](https://doi.org/10.1016/j.molliq.2017.04.051)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Nanoemulsion as a novel carrier system for improvement of betulinic acid oral bioavailability and hepatoprotective activity

Ranjit K Harwansh, Pulok K Mukherjee*, Sayan Biswas

School of Natural Product Studies, Department of Pharmaceutical Technology,
Jadavpur University, Kolkata - 700032, India

E-mail address of all authors: **Highlights:**

- Development and evaluation of hepatoprotective activity of betulinic acid nanoemulsion.
- Nanoemulsions (NEs) characterized through Zetasizer, TEM, FTIR analysis.
- Improved antioxidant potential against CCl₄ induced oxidative stress in rat liver.
- Enhancement of the bioavailability and hepatoprotective activity of betulinic acid

- | | | |
|----------------------|---|---------------------------|
| 1. Ranjit K Harwansh | : | harwanshranjeet@gmail.com |
| 2. Pulok K Mukherjee | : | naturalproductm@gmail.com |
| 3. Sayan Biswas | : | sayanb0@gmail.com |

***Corresponding author:**

Download English Version:

<https://daneshyari.com/en/article/5409039>

Download Persian Version:

<https://daneshyari.com/article/5409039>

[Daneshyari.com](https://daneshyari.com)