Title: Glycyrrhetinic acid-modified TPGS polymeric micelles for hepatocellular carcinoma-targeted therapy

Authors: Xiumei Zhu, Altansukh Tsend-Ayush, Zhongyue Yuan, Jing Wen, Jiaxin Cai, Shifu Luo, Jianxu Yao, Junxing Bian, Linfang Yin, Jianping Zhou, Jing Yao

PII: S0378-5173(17)30610-5
DOI: http://dx.doi.org/doi:10.1016/j.ijpharm.2017.07.011
Reference: IJP 16826

To appear in: *International Journal of Pharmaceutics*

Received date: 21-12-2016
Revised date: 2-7-2017
Accepted date: 4-7-2017

Please cite this article as: Zhu, Xiumei, Tsend-Ayush, Altansukh, Yuan, Zhongyue, Wen, Jing, Cai, Jiaxin, Luo, Shifu, Yao, Jianxu, Bian, Junxing, Yin, Linfang, Zhou, Jianping, Yao, Jing, Glycyrrhetinic acid-modified TPGS polymeric micelles for hepatocellular carcinoma-targeted therapy.International Journal of Pharmaceutics http://dx.doi.org/10.1016/j.ijpharm.2017.07.011

Glycyrrhetinic acid-modified TPGS polymeric micelles for hepatocellular carcinoma-targeted therapy

Xiumei Zhu[1], Altansukh Tsend-Ayush[1], Zhongyue Yuan[1], Jing Wen[1], Jiaxin Cai[1], Shifu Luo[1], Jianxu Yao[1], Junxing Bian[2], Linfang Yin[1], Jianping Zhou[1]*, Jing Yao[1]**

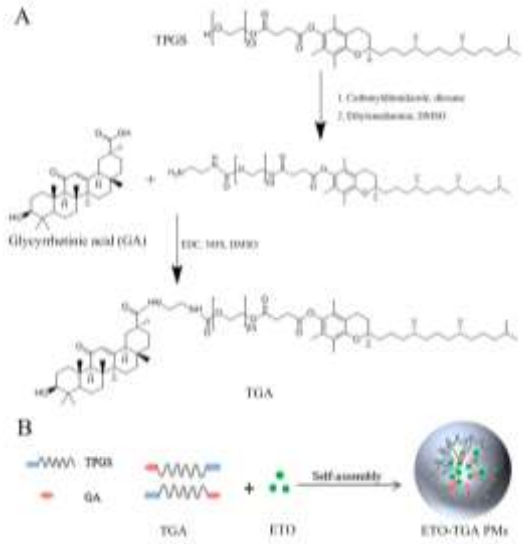
[1]State Key Laboratory of Natural Medicines and Jiangsu Key Laboratory of Druggability of Biopharmaceuticals, Department of Pharmaceutics, China Pharmaceutical University, 24 Tongjiaxiang, Nanjing 210009, China

[2] College of Life Science, Nanjing Normal University, 1 Wenyuan Road, Qixia District, Nanjing, Jiangsu 210097, China

** Correspondence to: Jing Yao, E-mail: yaojing@cpu.edu.cn (J. Yao). Tel.: +86 2583271102; Fax: +86 25 83301606.

* Correspondence to: Jianping Zhou, E-mail: zhoujpcpu@163.com (J.P. Zhou); Tel.: +86 2583271102; Fax: +86 25 83301606.

Graphical abstract



Scheme 1. (A) The routes of synthesis of TGA. (B) Preparation scheme of ETO-TGA PMs.

Abstract

In this study, glycyrrhetinic acid (GA)-modified D-α-tocopheryl polyethylene glycol 1000 succinate (TPGS) polymeric micelles (TGA PMs) were developed for the delivery of etoposide (ETO) to hepatoma cells. GA was incorporated as a ligand