## Targeted Delivery of 5-Fluorouracil-1-Acetic Acid (5-FA) to Cancer Cells Overexpressing Epithelial Growth Factor Receptor (EGFR) using Virus-Like Nanoparticles

Bee Koon Gan<sup>1</sup>, Kamal Rullah<sup>2</sup>, Chean Yeah Yong<sup>1</sup>, Kok Lian Ho<sup>3</sup>, Abdul Rahman Omar<sup>1,4</sup>,

Noorjahan Banu Alitheen<sup>1,5</sup> & Wen Siang Tan<sup>1,6\*</sup>

<sup>1</sup>Institute of Bioscience, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia.

<sup>2</sup>Department of Pharmaceutical Chemistry, Kulliyyah of Pharmacy (KOP), International Islamic University Malaysia (IIUM), 25200 Kuantan, Pahang, Malaysia.

<sup>3</sup>Department of Pathology, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia.

<sup>4</sup>Department of Veterinary Pathology & Microbiology, Faculty of Veterinary Medicine, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia.

<sup>5</sup>Department of Cell and Molecular Biology, Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia, 43400 UPM, Serdang Selangor, Malaysia.

<sup>6</sup>Department of Microbiology, Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia, 43400 UPM, Serdang Selangor, Malaysia.

\*Correspondence and requests for materials should be addressed to W.S.T. (email: wstan@upm.edu.my)

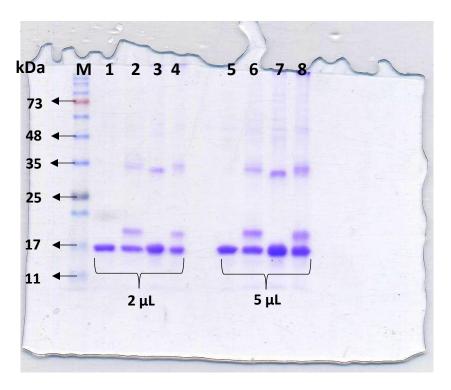


Figure S1. SDS-polyacrylamide gel of tHBcAg conjugated to CPP. The tHBcAg conjugated to CPP using EDC and sulfo-NHS was electrophoresed on 15% (w/v) SDS-polyacrylamide gel, and stained with CBB-R250. Lanes M: molecular mass markers (kDa), 1 & 5: tHBcAg, 2, 4, 6 & 8: tHBcAg plus CPP and cross-linker, 3 & 7: tHBcAg plus cross-linker without CPP



**Figure S2. Thin layer chromatography (TLC) of 5-FU and 5-FA.** The hydroxyl groups on the surface of silica gel make the stationary phase highly polar. 5-FA (carboxylic group of polar analyte) interacts strongly with the stationary phase, and moves slower compared to 5-FU (non-polar analyte), which interacts weakly with the stationary phase, and moves faster along with the solvent through the chromatography plate.