

Near Infrared Light-Triggered Human Serum Albumin Drug Delivery System with Coordination Bonding of Indocyanine Green and Cisplatin for targeting Photochemistry Therapy against Oral Squamous Cell Cancer

Running Title: Development of a novel drug delivery system with serum albumin-indocyanine green-cisplatin nanoparticles

Yuxin Wang^{1,*}, Diya Xie^{1,*}, Jiongru Pan¹, Chengwan Xia¹, Lei Fan¹, Yumei Pu¹, Qian Zhang¹, Yan hong Ni¹, Jianquan Wang^{2,#}, Qingang Hu^{1,#}

¹ Department of Oral and Maxillofacial Surgery, Nanjing Stomatological Hospital, Medical School of Nanjing University, Nanjing, China

² School of Medical Imaging, Bengbu Medical College, Bengbu, China

*These authors contributed equally to this work.

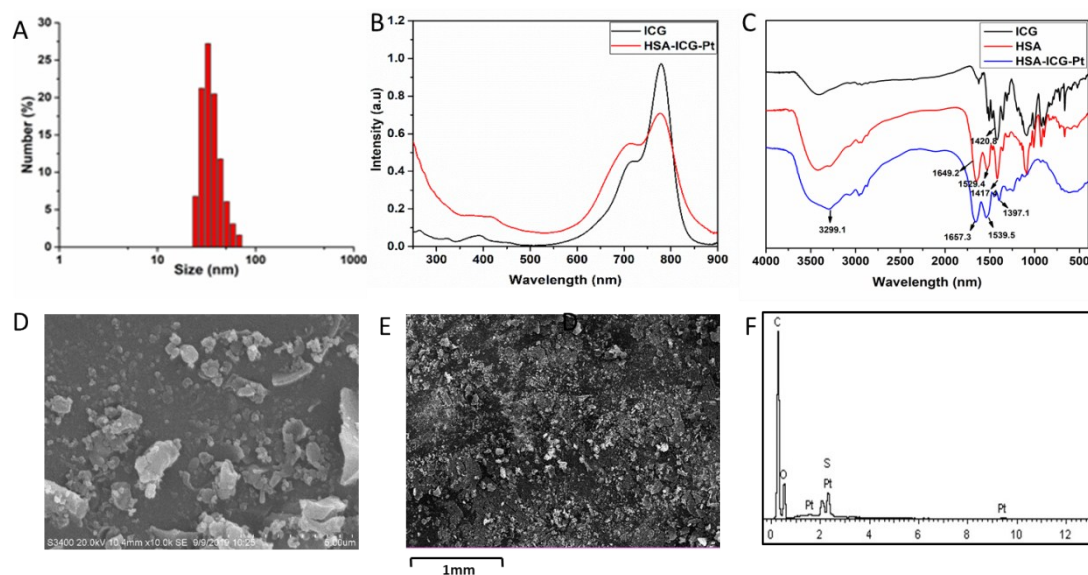


Figure S1: Characterization of HSA-ICG-DDP NPs. A: DLS, B: UV-Vis of ICG and HSA-ICG-DDP NPs, C: FT-IR of ICG, HSA and HSA-ICG-DDP NPs, D-F: SEM and EDX of HSA-ICG-DDP NPs

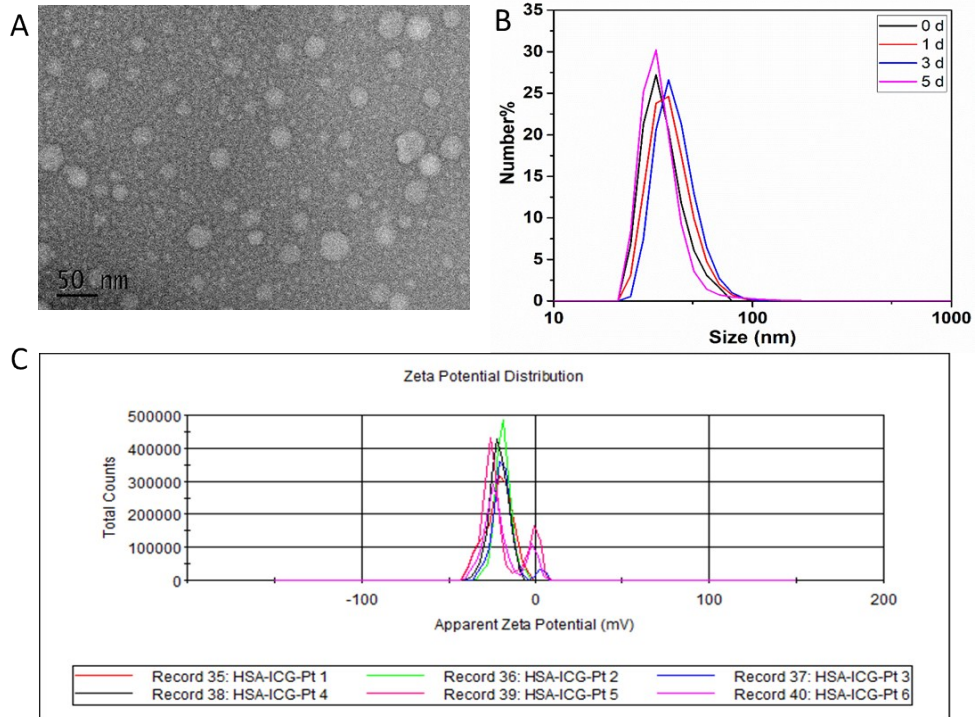


Figure S2: Stability of HSA-ICG-DDP NPs after 5 days A: TEM image, B: Size Stability by DLS, C: Zeta Stability by DLS

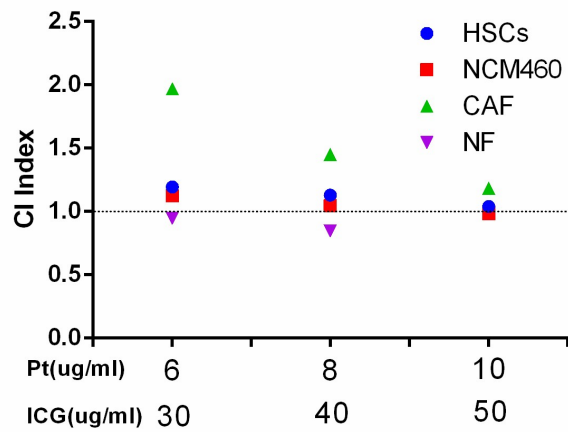
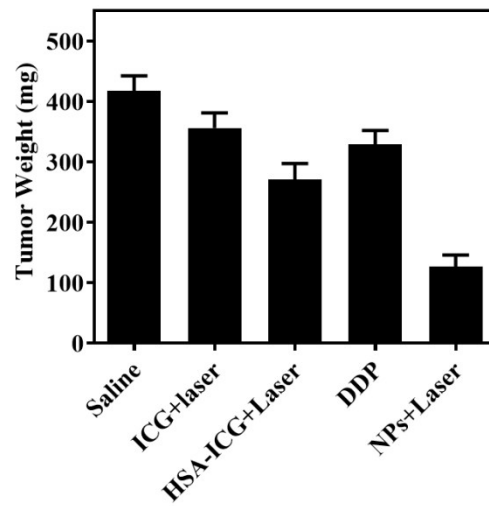


Figure S3: The value of the combination index studies in living cells. The combination index (CI) analysis was used to evaluate the synergistic effect of co-delivery systems. The value of $CI > 1$, $= 1$, or < 1 represented antagonism, additive, and synergism for combinational therapy.



Group	Saline	ICG +Laser	HSA-ICG +Laser	DDP	NPs +Laser
Tumor Weight (mg)	417.55 ± 61.14	356.32 ± 60.96	270.27 ± 66.36	328.73 ± 57.12	126.73 ± 47.24

Figure S4: The tumor weight after various treatments for 7 days