

**Rapid and simple detection of Tamiflu-resistant influenza virus:
Development of oseltamivir derivative-based lateral flow
biosensor for point-of-care (POC) diagnostics**

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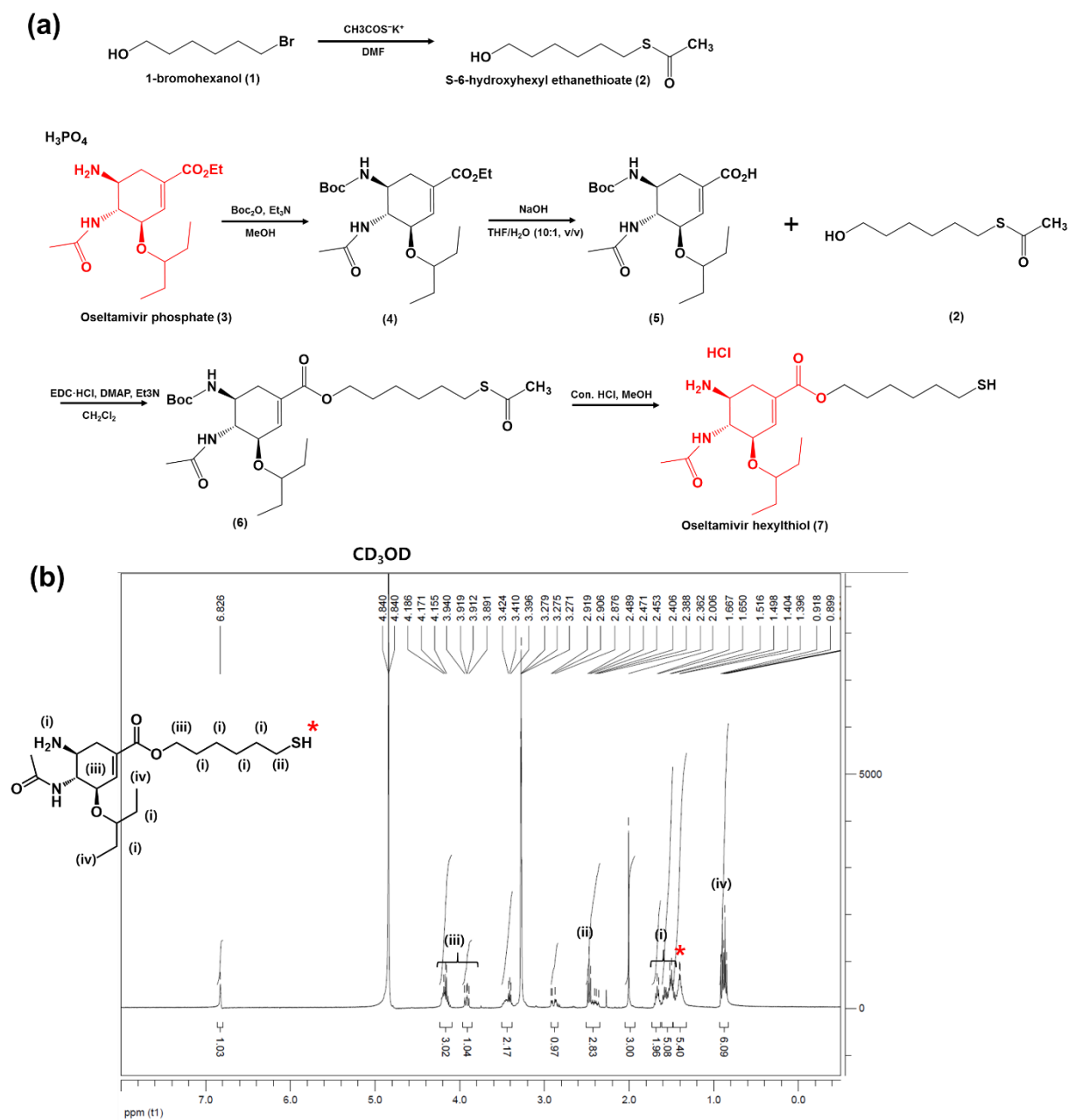


Figure S1. (a) Synthetic scheme, and (b) ¹H-NMR spectra of osetamivir hexylthiol (OHT) in CD₃OD (*: thiol group (-SH)).

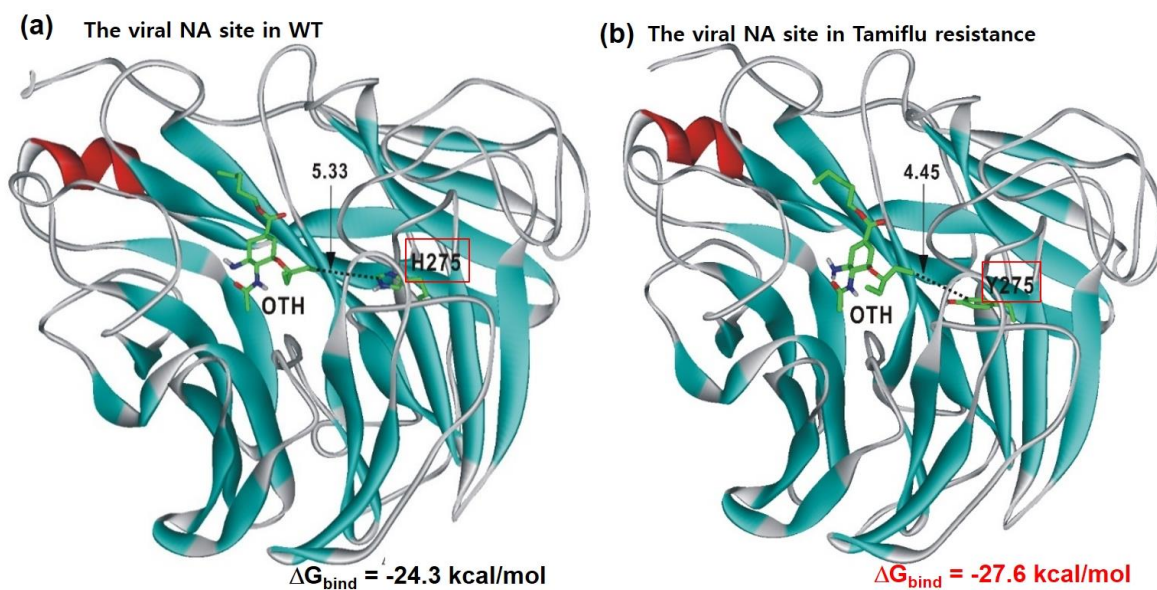


Figure S2. Comparative view of the docking poses of OHT in the NA site in (a) WT and (b) Tamiflu-resistance. Carbon atoms of OHT are indicated in green. The interatomic distances between the terminal 3-pentyl group of OHT and the aromatic rings of residue 275 are also shown.

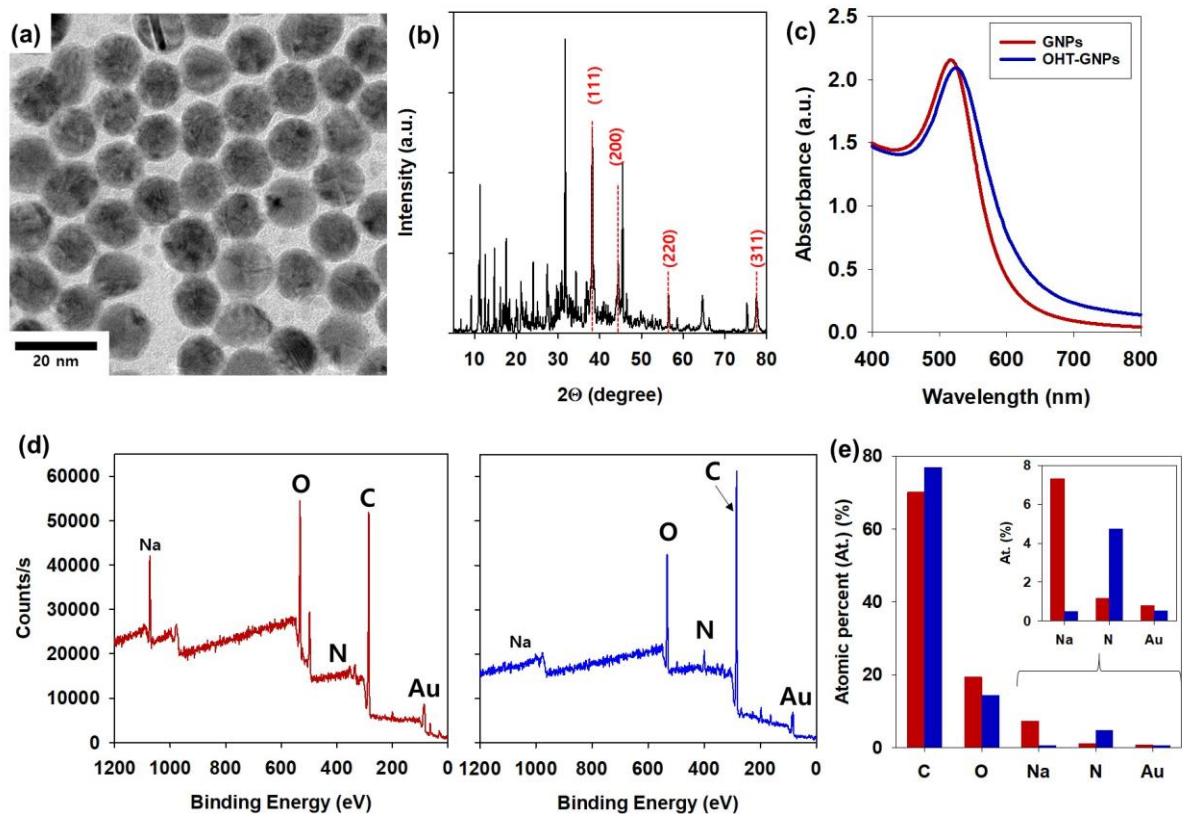


Figure S3. Characterization of gold nanoparticles (GNPs) and OHT-GNPs. (a) TEM image and X-ray diffraction (XRD) pattern of GNPs, (c) absorbance spectra of GNPs (deep red) and OHT-GNPs (deep blue), (d) the elemental composition on their surface and (e) their atomic percent (At.) by X-ray photoelectron spectroscopy (XPS) analysis (GNPs: deep red, and OHT-GNPs: deep blue).

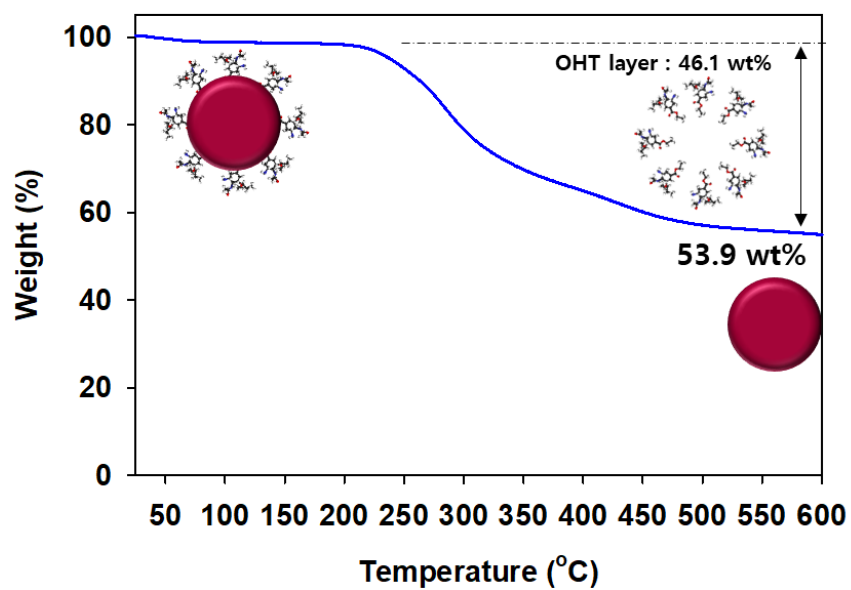


Figure S4. Thermogravimetric analysis (TGA) of OHT-GNPs. OHT-GNPs contains approximately 46.1% OHT and 53.9 % GNPs.