Gold-Stabilized Carboxymethyl Dextran Nanoparticles for Image-Guided Photodynamic Therapy of Cancer

Minchang Lee,‡a Hansang Lee,‡a N. Vijayakameswara Rao, a Hwa Seung Han, a Sangmin Jeon, a Jueun Jeon, a Seokyung Lee, a Seunglee Kwon, a Yung Doug Suh a,b and Jae Hyung Park*a

aSchool of Chemical Engineering, Sungkyunkwan University, Suwon 16419, Republic of Korea

bResearch center for Convergence Nanobiotechnology (RC2NT), Korea Research Institute of Chemical Technology (KRICT), Daejeon 305-600, Republic of Korea

• Corresponding Author

Tel: +82-31-290-7288, Fax: +82-31-299-6857, E-mail: jhpark1@skku.edu
Fig. S1. $^1$H-NMR spectra of (a) CMD (500 MHz, D$_2$O) and (b) CMD-CA conjugate (500 MHz, D$_2$O/CD$_3$OD)
Fig. S2. UV/Vis spectra and a photograph of the GS-CNPs for different feed ratios of HAuCl₄ and tertiary amine.
Fig. S3. *In vitro* cytotoxicity assessment. SCC7 cells were treated with different concentrations of CNPs or GS-CNPs.
<table>
<thead>
<tr>
<th>Sample</th>
<th>Feed ratio&lt;sup&gt;a&lt;/sup&gt;</th>
<th>DS of CA&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Size (nm)&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNPs(5)</td>
<td>0.10</td>
<td>5.4</td>
<td>131.5±0.7</td>
</tr>
<tr>
<td>CNPs(10)</td>
<td>0.20</td>
<td>9.6</td>
<td>160.8±1.4</td>
</tr>
<tr>
<td>CNPs(15)</td>
<td>0.40</td>
<td>14.1</td>
<td>208.2±0.6</td>
</tr>
</tbody>
</table>

<sup>a</sup> Molar feed ratio of EtCA to sugar residues of CMD polymer

<sup>b</sup> Degree of substitution calculated using <sup>1</sup>H-NMR

<sup>c</sup> Measured by dynamic light scattering in PBS

Table S1. Physicochemical characteristics of CNPs. The characteristics were examined depending on the degree of substitution of the hydrophobic moiety.