## **Supplementary Information for**

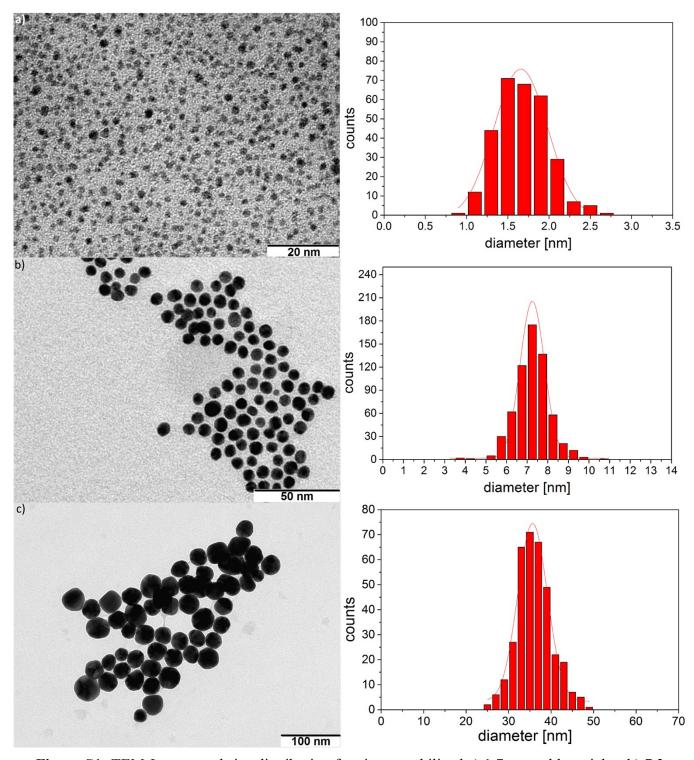
## Size Dependent Targeted Delivery of Gold Nanoparticles Modified with the IL-6R-Specific Aptamer AIR-3A to IL6-R-carrying Cells

Lisa Prisner,\*a Nadine Bohn,\*a Ulrich Hahn,b and Alf Mews a

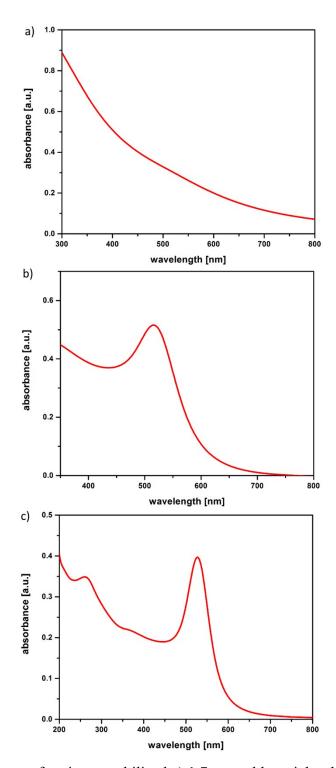
<sup>a</sup> Universität Hamburg, Institute for Physical Chemistry, Grindelallee 117, 20146 Hamburg, germany. Fax: (0049)-(0)40-42838-7727; Tel: (0049)-(0)40-42838-3431;

Email:Alf.Mews@chemie.uni-hamburg.de

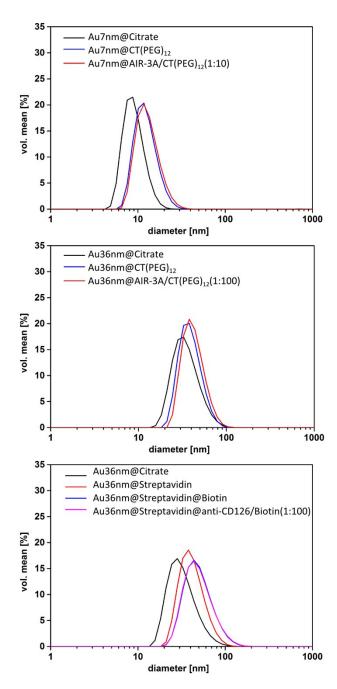
<sup>b</sup> Universität Hamburg, Institute for Biochemistry and Molecular Biology, Martin-Luther-King-Platz 6, 20146 Hamburg, germany.



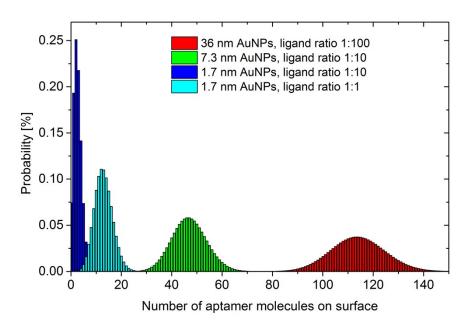
**Figure S1:** TEM-Images and size distribution for citrate-stabilized a) 1.7 nm gold particles, b) 7.3 nm gold particles and c) 36 nm gold particles



**Figure S2:** UV-Vis spectra for citrate-stabilized a) 1.7 nm gold particles, b) 7.3 nm gold particles and c) 36 nm gold particles



**Figure S3:** Hydrodynamic diameter determined by dynamic light scattering for (a) citrate-stabilized, aptamer-functionalized and PEG-coated 7 nm gold particles, (b) citrate-stabilized, aptamer-functionalized and PEG-coated 36 nm gold particles, and (c) citrate-stabilized, streptavidin coated, antibody-functionalized as well as biotin-saturated 36 nm gold particles.



**Figure S4:** Poisson distribution of amount of aptamer molecules on the differently sized gold nanoparticles, employing ligand ratios of aptamer to PEG of 1:1, 1:10 or 1:100.