

## Preparation of Surface-Modified Magnetic Nanoparticles for Glycoprotein Capture

김영대, 김소연<sup>1,†</sup>

충남대학교; <sup>1</sup>충남대학교

(kimsy@cnu.ac.kr<sup>†</sup>)

Nanoparticles have hold greates potentials in various application fields because of their small diameter and unique properties. Especially, magnetic nanoparticles (MNPs), have attracted much attention as a biosensor material due to convenient operation, biocompatibility, and simple synthesis process. MNPs with magnetic properties can be easily assembled by and external magnetic field, making more sensitive, faster and more accurate detection of biomolecules. Increasing the capture efficiency of the target molecules can be achieved by specific ligand conjugation. We synthesized MNPs by thermal-decomposition method for monodisperse and uniform size. Subsequently, specific ligands were attached to the surface of MNPs for selective capture of glycoprotein. Furthermore, the morphologies, chemical compositions and electromagnetic properties of MNPs were evaluated.