세미나 초록

성명	김광명
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발표 주제	**Peptide-drug conjugate nanoparticles for cancer treatment**
발표 내용	Peptide-drug conjugate nanoparticles are bioreversible medication that undergo enzymatic or chemical transformation *in vivo* to release the active drug, which can exert desired pharmacological effect. This concept is now well established as a strategy to reduce severe toxicities of anticancer drugs by improving the cancer selectivity that can be activated in tumor microenvironment. Recently, many researchers more improved the pharmacokinetic (PK) characteristics of small-molecule prodrugs by nanoparticle-based drug delivery systems, which successfully enhanced the anticancer efficacy and reduced adverse effects. However, such approaches were mainly achieved by encapsulation or conjugation to polymeric-, lipid- or inorganic nanocarriers, thus showed low drug loading contents, *in vivo* toxicity by non-specific drug release and carrier itself. In addition, their unfavorable features for quality control (QC) and mass production hindered successful commercialization of prodrug nanomedicine. To overcome these limitations, our lab has focused on carrier-free cathepsin B-specific Peptide-drug conjugate nanoparticles, and has published excellent results in many papers. Herein, we want to introduce these researches with recent advances and progress for peptide-drug nanoparticles for cancer immunotherapy.