

세포 및 조직공학에 접목시킬 수 있는 새로운 융합 기술들(Advanced fusion techniques for cell and tissue engineering)

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In this presentation, we will talk about several types of nanoparticles and cell transplantation techniques that can be applied to cellular behavior control, photothermal cancer therapy, and tissue regeneration. We will discuss about modified gold nanoparticles that can be used as an ion carrier to enhance cellular neurodevelopment. Also pH-sensitive aggregative gold nanoparticles (PSAuNPs) loaded in tumor-tropic mesenchymal stem cells (MSCs) that can improve the tumor-targeting efficiency and the photothermal effect of AuNPs will be introduced. We will introduce new cell transplantation method that can enhance the therapeutic efficacy and reduce the cell dosage in the therapy for limb ischemia. Based on our results, Combining advanced nanoparticles with new cell transplantation method could enhance the therapeutic efficacy of various methods based on cell and tissue engineering.