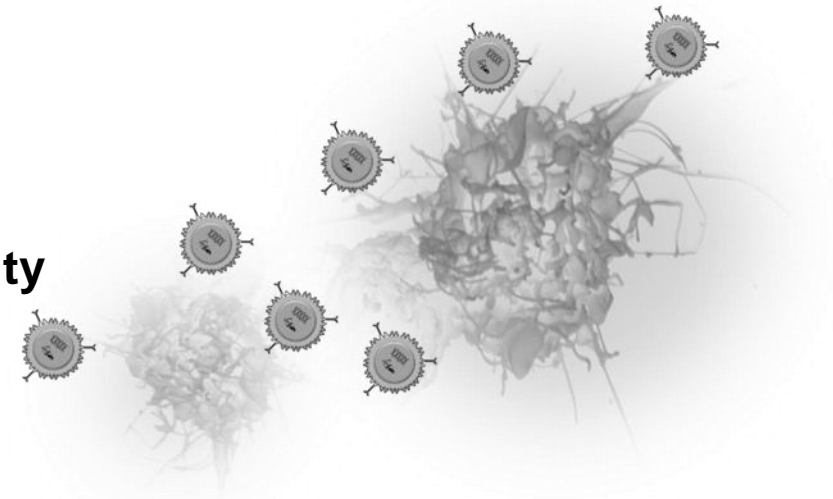


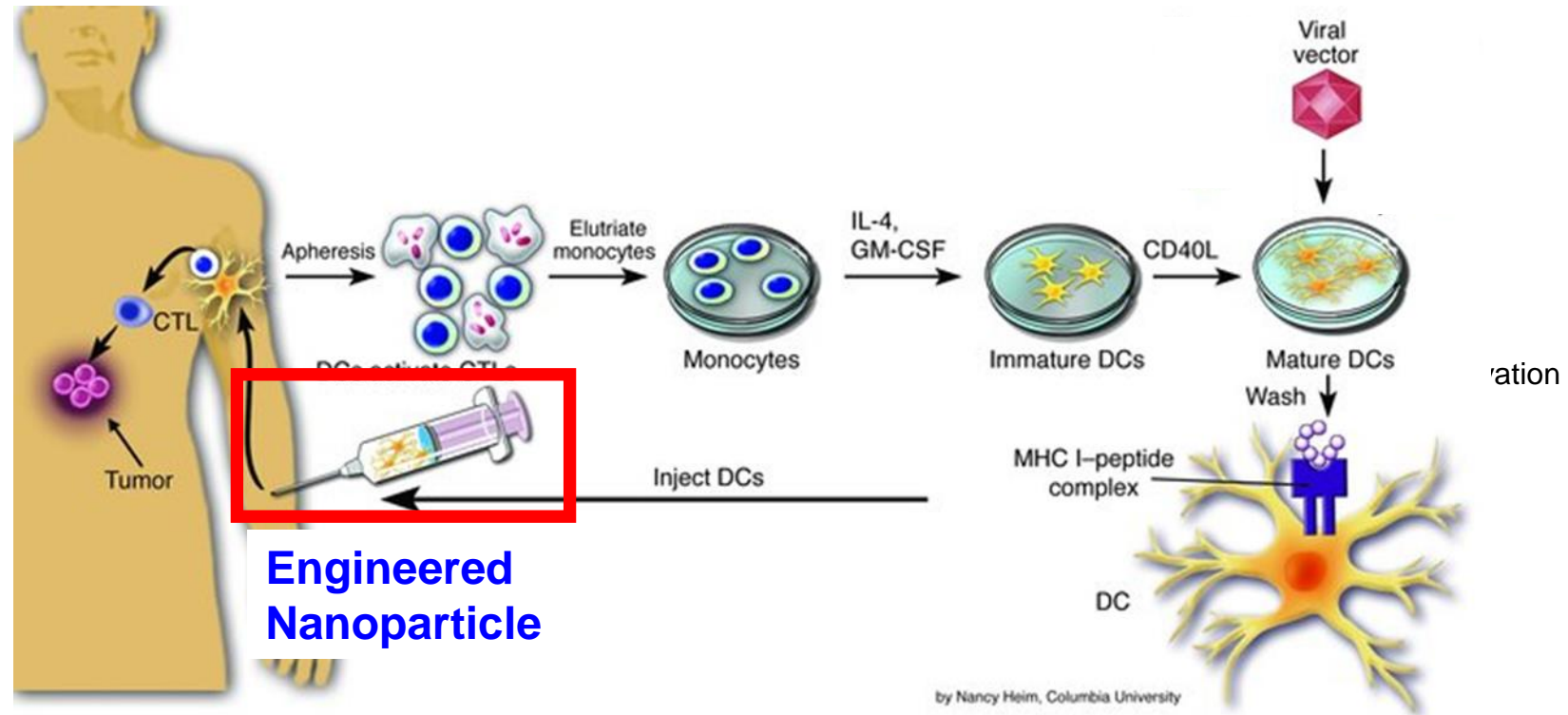
# ***In vivo* stepwise immunomodulation using chitosan nanoparticles as a platform nanotechnology for cancer immunotherapy**

**Hee Dong Han**

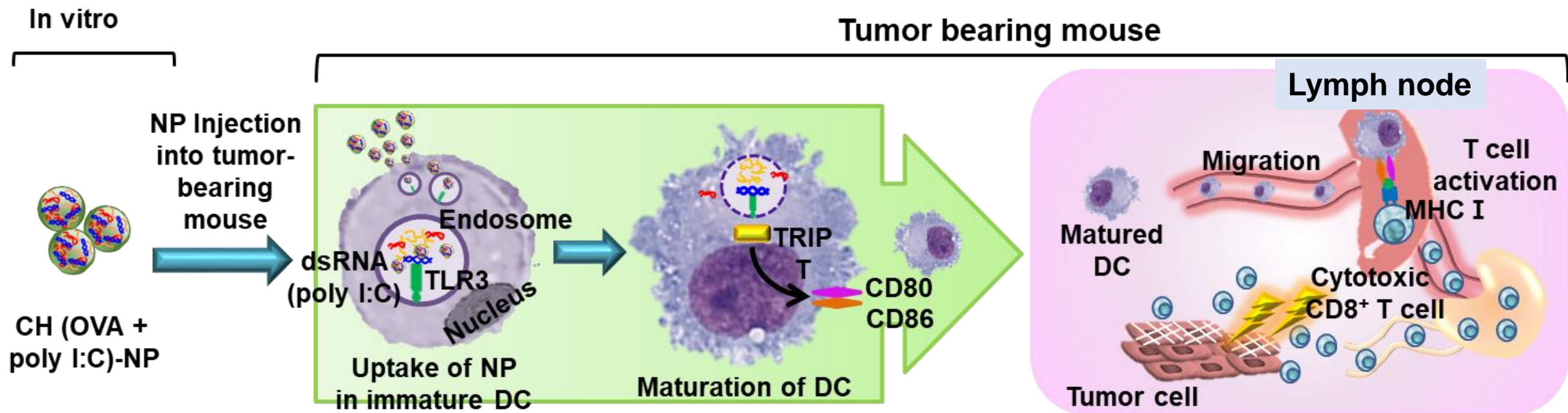
**School of Medicine, Konkuk University**



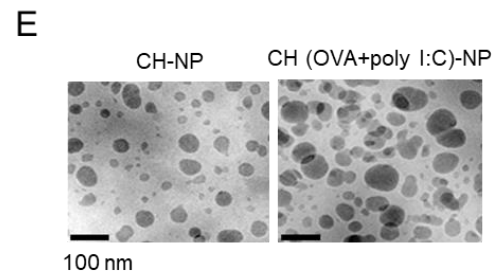
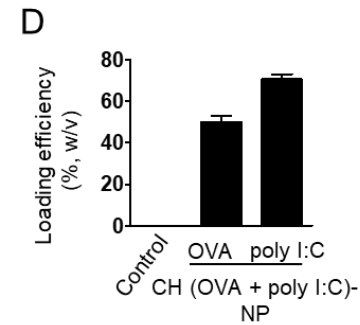
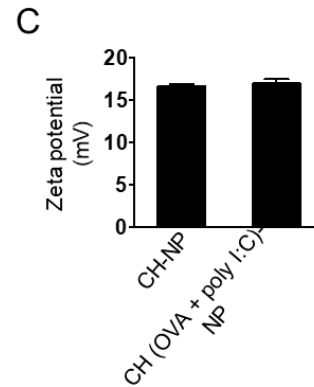
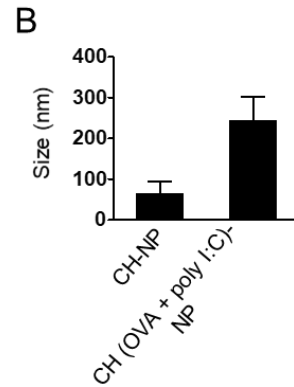
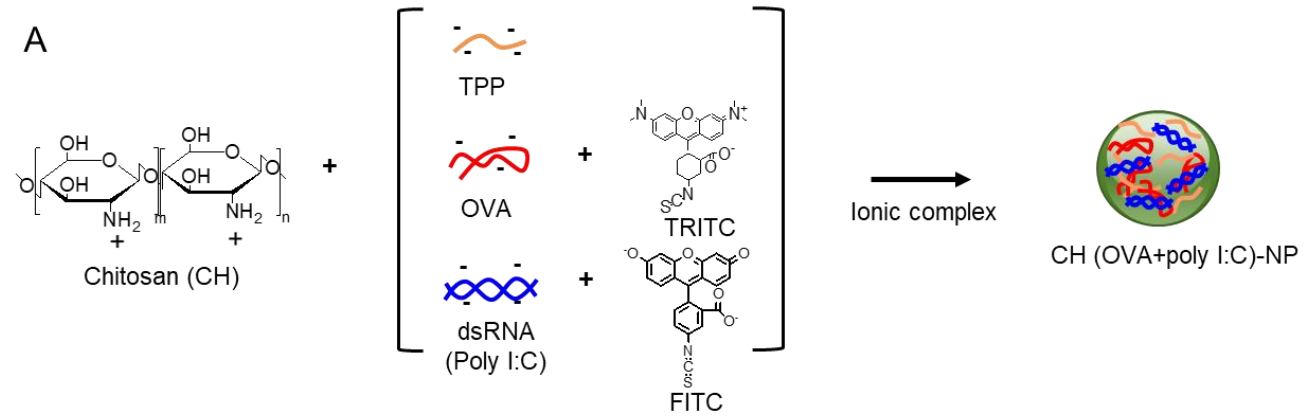
# DC-based cancer immunotherapy



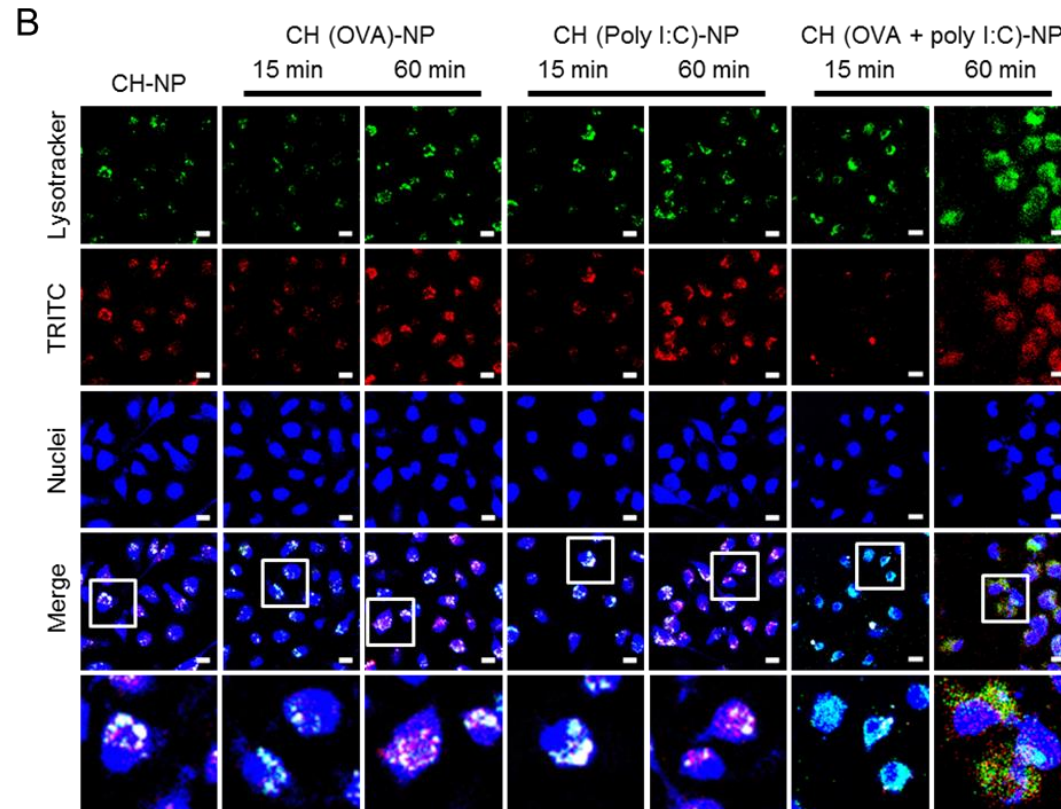
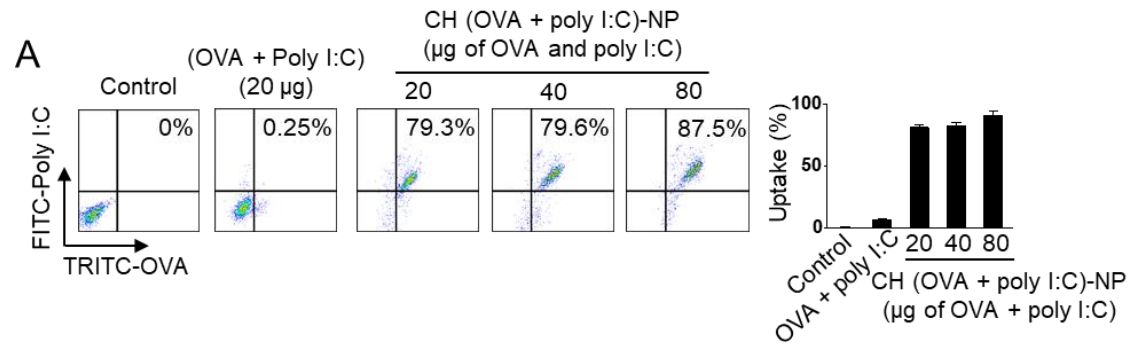
# Overall concept



# Physical properties of CH-NPs

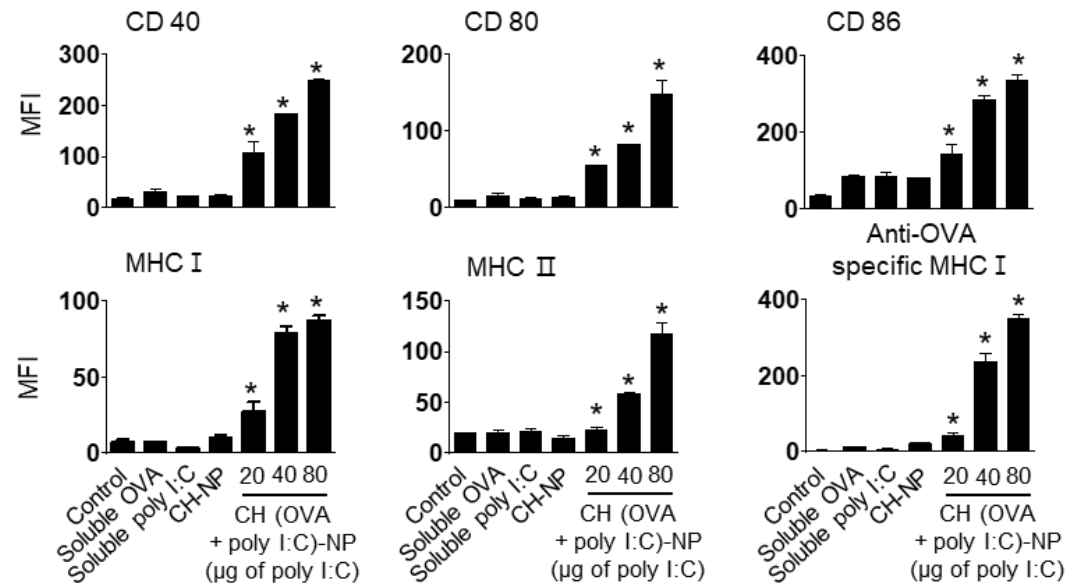


# Intracellular delivery of CH-NPs to DCs

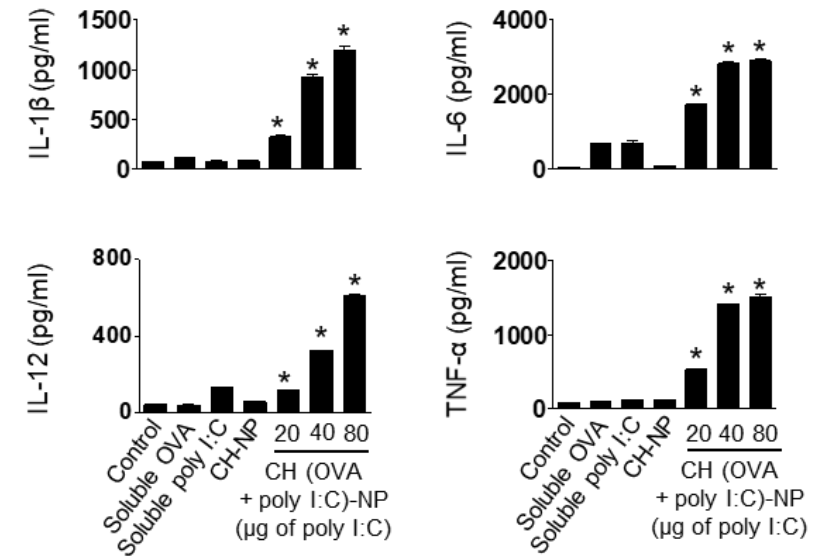


# Maturation and activation of DCs induced by CH-NPs

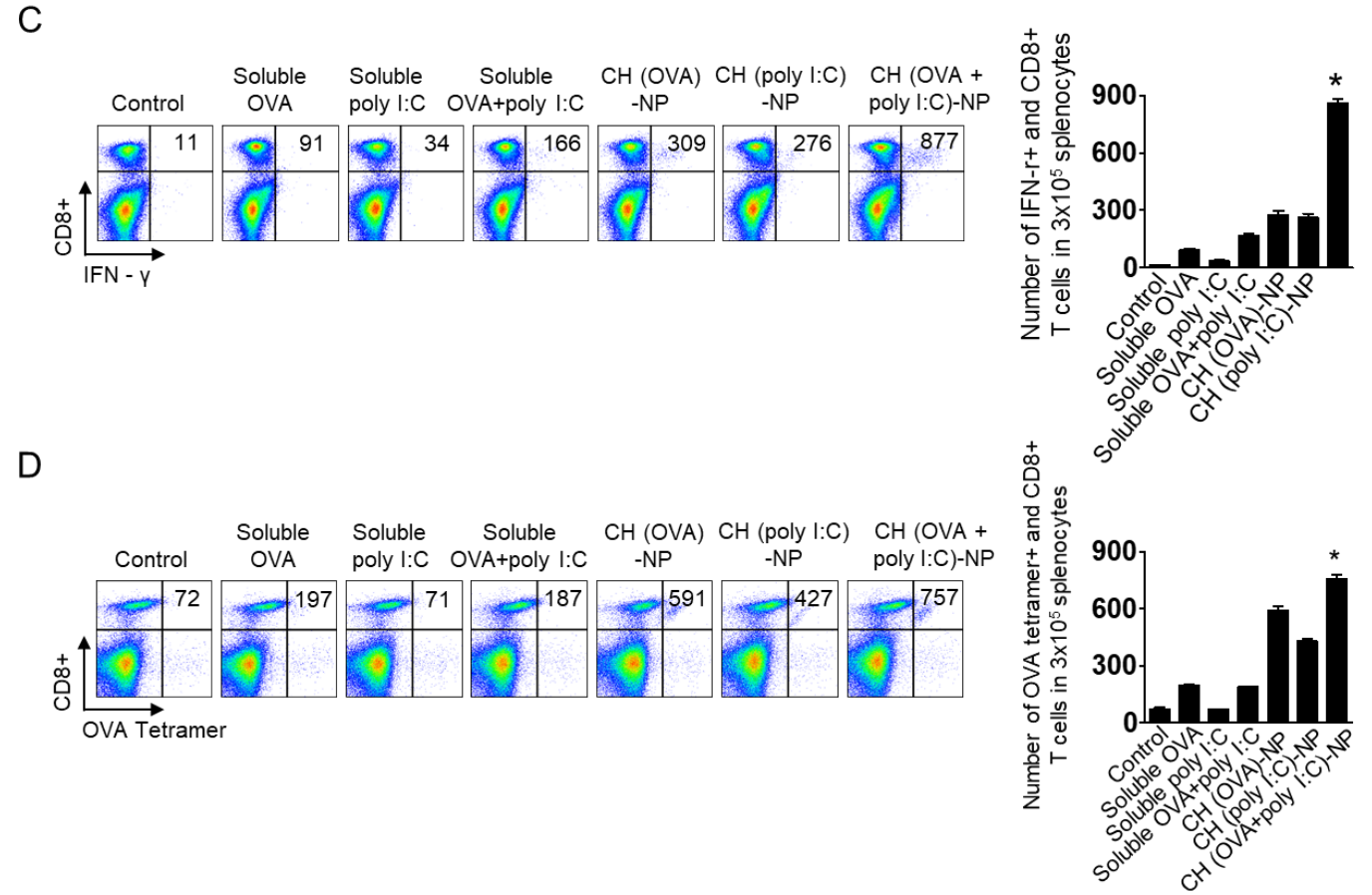
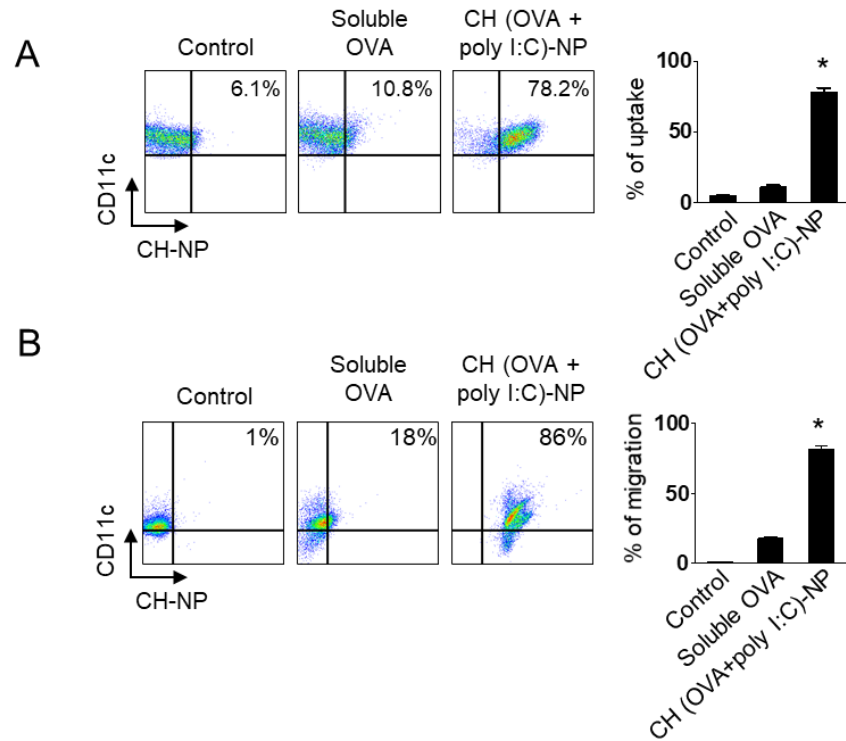
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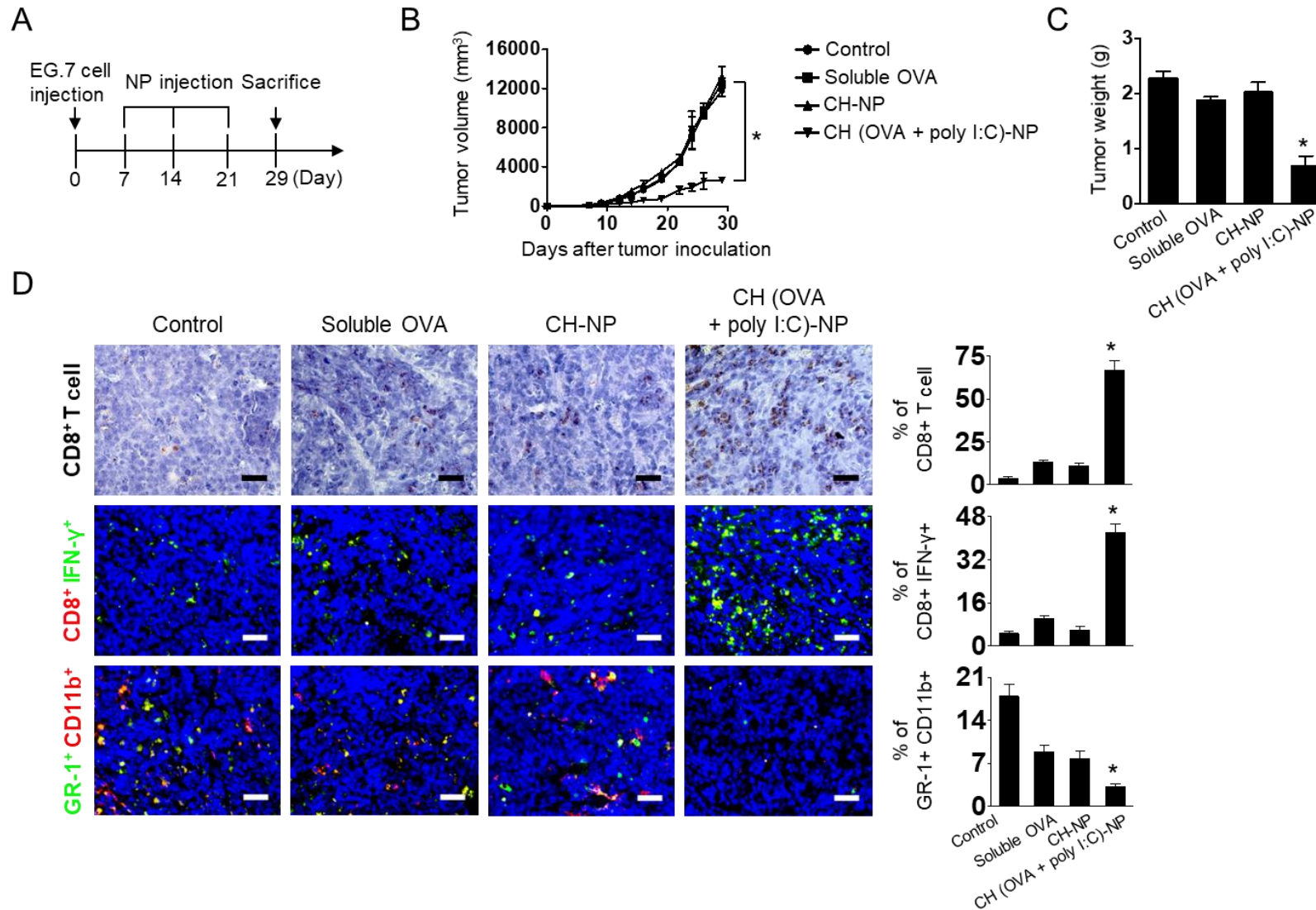
B



# In vivo stepwise CH-NP-based active immune response



# Therapeutic efficacy of CH-NP treatment in EG.7 tumor model





- **We demonstrated that a novel in vivo active cancer immunotherapy based on CH-NP loaded with an adjuvant and antigen to increase in vivo maturation of DCs lead to potent antigen-specific CD8+ T cell immunity.**
- **Our CH-NP system could be expanded and developed to include additional therapeutic and experimental approaches.**