

# Development of thermoresponsive nano-particle for effective delivery of growth factor

**Kenichi Nagase**

*Graduate School of Biomedical and Health sciences, Hiroshima University*

In this study, we aimed to develop basic fibroblast growth factor (bFGF)-releasing nanoparticles for regeneration of dermal tissue. The nanoparticles were prepared by electro spray a bFGF-dispersed poly (D,L-lactide-co-glycolide) emulsion. bFGF-loaded PLGA nanoparticles can be developed by optimizing the applied electro spray voltage and the oil: water ratio of the emulsion. The prepared nanoparticles exhibited prompt release at the initial duration and continuous gradual release at the subsequent duration. These results indicated that the prepared bFGF-releasing nanoparticles would effectively deliver bFGF to dermal tissue.