

# The 237<sup>th</sup> MANA Special Seminar



## Combinatorial Screening of Stem Cell Response to Gradient Nanobiomaterials

Chair: Dr. Guoping Chen (MANA PI)

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Biomaterials that have gradients in material composition and functional properties may be used to engineer interfaces between two different tissues (soft-to-hard) or for rapid screening of cell response to scaffold properties suitable for tissue engineering applications. This talk reports a method for generating nanofiber scaffold libraries containing gradients in material composition and properties. The method is based on “bi-spinneret electrospinning” system, wherein the gradients are obtained by using two syringes where one is filled with poly( $\epsilon$ -caprolactone) (PCL) solution and the other with PCL solution containing calcium phosphate particles, nano hydroxyapatite (nHA) for example. The electrospun scaffolds consisted of non-woven PCL nanofibers containing a linear gradient of nHA, as a single scaffold specimen, which facilitated screening of the effect of nHA composition on human bone marrow stromal cells (hBMSCs) response.

**Venue: Seminar Room #431, 4F, MANA Bldg.,**

**Date: December 5<sup>th</sup> Monday Time: 15:30-16:15**

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