

CO-ORGANIZED EVENT

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**Association of intervertebral disc degeneration with upregulated myofibroblastic activity in nucleus pulposus**

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Intervertebral disc (IVD) is a joint-like organ between two vertebral bodies throughout the spine. Nucleus pulposus (NP) is a gelatinous core disc tissue, enriched with aggrecan to retain water and confer swelling pressure against compressive strains. Previous studies have indicated an induction of fibrillated matrix in NP of degenerative IVD, displaying pathological fibrosis morphological features and fissures. Disc degeneration is associated with enhanced myofibroblast activity in NP. Aim of this study is to test if disc degeneration is associated with myofibroblast activity. Degenerative NP shows enhanced myofibroblastic cells activity. NP fibrosis is a pathological phenotype in human degenerative IVD. Fibrocytes-like cells and resident NP cells with enhanced myofibroblastic activity was evidenced in degenerative IVD, suggesting their importance in disc fibrosis. Better understanding molecular mechanisms of orchestrating myofibroblast activity of fibrocyte and resident NP cell in degenerative disc would provide insights in developing therapeutics in prevention of disc fibrosis.

**Biography**

Lonoy Yan Peng completed her Pediatric Residency/Chief Residency at Beijing Medical University Hospitals and practiced as a Pediatric Nephrologist for two years at the same hospital. After a combined six years of basic research on kidney disease at Mayo Clinic, Rochester and UT-Southwestern Medical Center (UTSW), Dallas, she went to University of Pittsburgh Medical Center (UPMC) for her Pathology Residency. Upon the completion, she took two fellowship trainings in Breast and Gynecologic Pathology at UPMC and Cytopathology at Beth Israel Deaconess Medical Center and Harvard Medical School in Boston, respectively.

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