One of the first laboratories to be established in the new medical school at NTU, Lee Kong Chian School of Medicine, is the Laboratory of Muscle Biophysics under the leadership of Professor Michael Ferenczi. Mike will describe the use of novel techniques to explore the molecular mechanism of contraction. Using fluorescent reporters of biochemical changes, the relationship between work, power output and ATP hydrolysis will be revealed, with millisecond time resolution. The technique will be shown to provide insight into the workings of the heart, namely how cardiac stretch enhances force generation. Cardiac muscle adapts in various ways to the demands made on it. One recently observed change is phosphorylation of the regulatory light chain. Mike will show how phosphorylation modifies cardiac behaviour, suggesting new approaches to modulate cardiac performance. Initial results from permeabilised muscle fibres and isolated myofibrils will be shown, together with the results of investigation into the mechanisms by which single point mutations in sarcomeric proteins give rise to hypertrophic cardiomyopathies, a cause of cardiac sudden death in young adults.

**CBC SEMINAR ANNOUNCEMENT**

**Professor Michael Alan Ferenczi**  
Lee Kong Chian School of Medicine, NTU

*Muscle and cardiac biophysics at LKCMedicine. Past results and a vision for the future.*

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**Date:** 22nd January 2013 (Tuesday)  
**Time:** 3:00pm – 4:30pm  
**Venue:** NTU SPMS CBC Building Level 2, Conference Room  
**Host:** Assoc Professor Xing Bengang