



# Biomedical Engineering Seminar Series

2<sup>nd</sup> Semester, Academic Year 2015

Date: January 12, 2016

Time: 10.30-11.30

Room 6373, 3rd level, Building 3,  
Department of Biomedical Engineering,  
Faculty of Engineering;  
Mahidol University



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## **"Acceleration of differentiation and orientation of cultured cell by bio-mechatronics methodology"**

In response to the outcome of the recent years of cell culture technology, the effect of mechatronics stimulus on differentiation and orientation of cells has been studied with the aid of micro-machining technology. A variety of cells were cultured under electromagnetic (electric pulses, magnetic field) or mechanical (shear stress, excess gravitational force, vibration) stimulation, to compare the differentiation and orientation. The electrical and mechanical acceleration mechanism of differentiation and organization of cells would contribute to regenerative medicine. The tissue culture measuring system in vitro would be applied to the alternative test system for animal experiments.



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