



Biomedical Engineering Seminar Series

1st Semester, Academic Year 2018

Date: August 24, 2018

Time: 9.00 – 10.00 AM

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



Prof. Shigehiro Hashimoto

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“Effect of Shear Stress on Biological Cells”

Biomechanics is one of special fields of study of engineering on biology. A cell is a unit of biological system. The cell is exposed to a mechanical field in the biological system and show response to the field: deformation, and migration. In the fluid, the shear stress is the product of the viscosity and the shear rate. Over the threshold, the cell is exfoliated from the scaffold, or destroyed. Erythrocyte deforms in the shear flow. The deformability depends on the aging of the cell. The endothelial cells make orientation on the inner surface of the blood vessel. The myoblast shows response to the shear field in the different way from the endothelial cell.



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