



# Biomedical Engineering Seminar Series

1<sup>st</sup> Semester, Academic Year 2016

Date: August 19, 2016

Time: 9.00-10.00 AM

Room R-114, 1st level, Building 1,  
Department of Biomedical Engineering,  
Faculty of Engineering;  
Mahidol University



## Shigehiro Hashimoto,

Dr. of Engineering & Dr. of Medicine,  
Professor, Associate to the President,  
Dean of Admissions center,  
Kogakuin University, Japan

## "Effect of Blood Flow on Clot Formation and Erythrocyte Destruction"

In a low shear flow, clot grows. In a high shear flow, on the other hand, erythrocytes are destroyed. Clot growth on the wall of the blood flow path is governed by the wall shear stress in the blood flow. Erythrocyte destruction in the blood flow is governed by several factors: the shear stress, the shear rate, and the exposure time. The concave and convex cone type of the Couette flow testing device enables quantitative evaluation for the effect of the blood flow on clot formation and erythrocyte destruction. The optimum pulsatile flow prevents clot growth and erythrocytes destruction, simultaneously. The experimental results contribute to the design of the flow path of blood, and control of the blood flow.

Department of Biomedical Engineering, Faculty of Engineering, Mahidol University

<http://www.eg.mahidol.ac.th/dept/egbe/>

Email: [matchima.rat@mahidol.ac.th](mailto:matchima.rat@mahidol.ac.th)

Tel: +662-889-2138 Ext: 6351-2, 6367

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