



Department of Biomedical Engineering

Faculty of Engineering

Mahidol University

Wisdom of the Land



EGBE 692 Research Seminar for Biomedical Engineering I EGBE 690 Biomedical Engineering Seminar I

Date: October 28, 2014 Time: 10AM-11AM

Department of Biomedical Engineering

Mahidol University (Room 6373)



Dr. Erwin Berthier

**Department of Biomedical Engineering
University of Wisconsin-Madison**

“In-vitro Microfluidics and MEMS”

The activation and response of the immune system is a complex and dynamic process involving multiple cells and signaling molecules. In the context asthma, immune exacerbations are instigated by a class of small molecule called eicosanoids, which are regulated by cross-talk between the epithelium and leukocytes. Current platforms are limited to study these processes as they require a large number of cells and do not allow flexibility in probing the cellular communication at the source of eicosanoid production. We have developed novel in vitro platforms that allow a modular approach in studying dynamic and multi-cell type and show how these platforms are enabling in characterizing key elements in asthma regulation.