

# New Technologies for Diagnosis and Treatment of Disease

SINGAPORE



**Date:** July 7 - 8, 2009

**Location:** NUS Campus, Singapore



Photography: Alexander S. Budnitz

**Massachusetts Institute of Technology**

**For the first time in Asia, five of MIT's distinguished faculty will come together to teach a course on advances they have led in the development of technology for the diagnosis and treatment of disease.**

## **Faculty:**

- ◆ **Roger Kamm**, Professor, Mechanical Engineering and Biological Engineering (Course Director)
- ◆ **Subra Suresh**, Dean of Engineering and Professor, Mechanical Engineering and Biological Engineering
- ◆ **Jianzhu Chen**, Professor, Immunology and Biology
- ◆ **Jongyoon Han**, Associate Professor, Electrical Engineering and Biological Engineering
- ◆ **Krystyn Van Vliet**, Assistant Professor, Material Science and Engineering

## **Course Overview:**

New technologies are becoming available that will have significant impact on how we screen new drugs, test for toxicity, diagnose disease, and optimize patient-specific therapies. In this course, we examine three related areas of current R&D.

- ◆ The role of mechanobiology in cell behavior and disease.
- ◆ Microfluidic technologies for cell culture, cell separation, protein separation, and single molecule manipulation.
- ◆ New models for drug development and studies of disease. We discuss the humanized mouse model and new methods for mimicking organ function in microfluidic systems.

## **Who Should Attend:**

This course is recommended for individuals with a Bachelor's degree or higher in either the biological or physical sciences or engineering. It would be useful for those engaged in basic research who wish to investigate the effects of physical stimuli on biological function, and for project managers or group leaders from biotech, pharmaceutical, or medical products companies who seek to develop methods of diagnosis or treatment of disease.

## **Registration Fees:** \$950 US - \* *limited enrollment due to lab demonstrations* \*

- ◆ Multiple registrants applying together from one company are eligible for a group discount upon request. Groups of 2 to 5 receive a 10% discount, while groups of 6 or more receive 15% off tuition.



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<http://shortprograms.mit.edu/singapore>