



BILKENT UNIVERSITY

unam - INSTITUTE of MATERIALS SCIENCE & NANOTECHNOLOGY

FACULTY OF SCIENCE

**MATERIALS SCIENCE and NANOTECHNOLOGY
GRADUATE PROGRAM SEMINAR**

“Microbiological Engineering”

Prof. Dr. Ali Demirci

Pennsylvania State University
Department of Agricultural and Biological Engineering

Research focus of Ali Demirci is Microbiological Engineering which has two directions:

- Inactivation/control of pathogenic microorganisms in foods.
- Productions of value-added products such as organic acids and antibiotics by microbial fermentations.

Both play important role in microbial food safety which is a big concern both from manufacturer and consumer perspective. Center for Disease Control (CDC) has estimated that 76 million Americans annually suffer from foodborne illnesses and approximately 5,000 of these cases are fatal.

Ali Demirci studies microbial destruction by using emerging processing operations such as irradiation, super critical carbon dioxide, high hydrostatic pressure, electrolyzed oxidizing water, and synergistic effects of utilization of anti-microbial agents during these emerging processes. These or any other novel processes are evaluated and optimized for elimination and/or control of pathogenic microorganisms. Also, the productions of antimicrobials by microorganisms such as organic acids, antibiotics, and biofuels are being enhanced by strain development, utilization of low cost media, novel bioreactor designs, and novel separation/purification methods.

Date : June 4, 2010 (Friday)

Time : 15:40

Place : Faculty of Science Building, A Block, Seminar Room (SA 240)

Tea and cookies will be served after the seminar