

Seminar Announcement

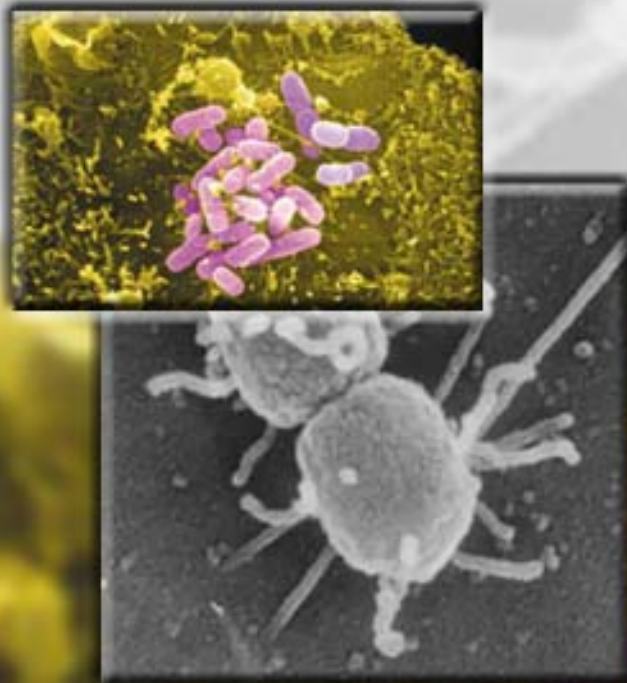
(Department of Biological Sciences & Office of Life Sciences)

Genetic approach for the identification of virulence genes of enteropathogenic

Escherichia coli

Ilan Rosenshine

Lecturer, The Hebrew University,
Department of Molecular Genetics and
Biotechnology, Israel



Enteropathogenic and enterohemorrhagic *Escherichia coli* (EPEC and EHEC) are closely related human pathogens. EHEC is an emerging zoonotic pathogen that causes acute gastroenteritis and hemorrhagic colitis. In addition, it produces the Shiga toxins, which sometimes lead to complications including renal failure, strokes and death. EPEC is an etiological agent of human diarrhea, and remains an important cause of infant mortality in developing countries. For their virulence, these pathogens encode a type III secretion system (TTSS) which delivers effector proteins into host cells, thereby interfering with host cell processes. We recently demonstrated that the TTSS is required to induce disassembly of focal-adhesions of infected epithelial cells, leading to cell detachment from the substratum. We developed a rapid assay to identify mutants that are deficient in inducing cell detachment and used this assay to screen a bank of about 4000 random mini-TnKan EPEC mutants. About 60 mutants were isolated, of which most were analyzed. The analysis of these mutants and the discovery of new genes required for the virulence of EPEC will be discussed.

Date: 6 Feb 2004, Fri
Time: 4 pm
Venue: LT 20
Host: A/P Leung Ka Yin

All are welcome