BMC physicians to lead international research collaboration to curb infectious diseases

EurekAlert

(Boston) Boston Medical Center (BMC) has been chosen to lead an investigation aimed at developing novel approaches to prevent tuberculosis (TB). Jerrold J. Ellner, MD, chief of the section of infectious diseases at BMC and professor of medicine at the Boston University School of Medicine (BUSM), a renowned expert in the field, will serve as principal investigator (PI) on the five-year, $3 million grant funded by the National Institutes of Health (NIH).

Ellner will lead an international research team with collaborators from Federal University D'Espirito Santo in Vitoria Brazil and the University of Medicine and Dentistry, Newark New Jersey. Edward Jones, an assistant professor of medicine from BUSM, is a key member of the research team.

This grant is part of an initiative from the NIH's International Collaborations in Infectious Disease Research (ICIDR) program, which supports global research to improve the treatment of individuals afflicted with tropical infectious diseases. Dr. Ellner's collaboration in Brazil with Dr. Reynaldo Dietze, Director of the Center for Infectious Diseases in Vitoria began in 1994. The ICIDR is a symbolic and prestigious bridge between collaborating institutions. The research collaboration also is funded through the Clinical Diagnostics Research Consortium (CDRC), a $30 million NIH contract that Dr. Ellner heads, which promotes the development of new TB diagnostics.

The main focus of the research is to identify the biological markers, or biomarkers, that indicate the presence of infection with Mycobacterium tuberculosis, a bacterium that causes TB in humans. The team will examine the changes in the expression of the biomarkers based on the time of infection, diagnosis and treatment.

In addition to looking at promising biomarkers, the team will execute a discovery-based approach, looking at the entire human genome to see what genes are increased or decreased in their expression.

"TB continues to be a major global health concern, killing nearly two million people each year," said Ellner. "By examining the characterizing individuals at high risk of TB, the new biomarkers will lead to novel treatments and vaccines to prevent the disease."

The study will be conducted in Brazil and the study populations will consist of people with high-risk of being exposed to Myobacterium tuberculosis, such as health care workers and those living with someone diagnosed with TB. In addition to characterization of biomarkers, the team will look at why some people are immune

and why others are susceptible to TB.

SOURCE [1]

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