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FOR IMMEDIATE RELEASE

**INNOVATIVE RESEARCH WILL IMPROVE UNDERSTANDING
OF LYME AND OTHER TICK-BORNE DISEASES**

WILTON, CT – December 6, 2005 – The National Research Fund for Tick-Borne Diseases, Inc. (NRFTD) announced today it will fund two innovative pilot studies designed to advance scientific understanding of Lyme disease and other tick-borne illnesses. The studies will focus on the physical structure and genetic makeup of two different tick-borne bacteria, and will yield important information concerning their ability to establish infection and cause disease in human hosts.

“These projects will utilize cutting-edge laboratory techniques to help develop our understanding of two important human pathogens,” said Leo J. Shea, III, Ph.D., Chairman of the NRFTD Board of Directors. “The data yielded will be of use to scientists in multiple disciplines associated with tick-borne diseases, and will drive further important laboratory and clinical research related to these organisms.”

Nikhat Parveen, Ph.D. (Assistant Professor of Microbiology and Molecular Genetics at the New Jersey Medical School, University of Medicine and Dentistry at New Jersey) will use her award moneys to study an outer surface protein of *Borrelia burgdorferi*, the bacterium that causes Lyme disease. This protein, known as OspC, is thought to play a key role during early Lyme infection. However, some strains of *B. burgdorferi* contain a defective OspC gene and fail to cause infection in mammals. By studying the wide variation in OspC expression among different strains of the bacterium, Parveen will attempt to tease out the specific factors that promote its ability to infect and disseminate through human tissues. This work will also have implications for improved diagnostic testing and vaccine development for Lyme disease.

Timothy John Kurtti, Ph.D. (Professor of Entomology at the University of Minnesota) will investigate how the parasite *Anaplasma phagocytophilum*, which invades certain white blood cells when transmitted to humans, survives the drastic environmental differences between warm-blooded mammals and cold-blooded ticks. Using a new genomic technology called microarray analysis, Kurtti will determine the specific genes that become active depending on whether the bacterium is in tick or human cells. The results of this work will provide crucial supplemental information to the recently completed but unannotated *Anaplasma* genome, and will advance current understanding of the bacterium’s ability to evade the immune response of its human host. Further, it will

likely establish microarray analysis as an important new technology for studying other bacterial pathogens transmitted by ticks.

Recognizing the pressing need to understand and cure tick-borne diseases, the NRFTD and its team of scientific advisors developed an expedited funding initiative based on rigorous scientific standards designed to attract the best researchers in the world. In this initial round of funding, the organization received an impressive selection of grant applications from well-respected investigators in the United States, Europe and Australia. With as many as half of all households affected by Lyme in some endemic areas, and with Lyme case reports rising dramatically, the need to understand tick-borne disease has never been greater.

About the National Research Fund for Tick-Borne Diseases, Inc.

The NRFTD is a nonprofit organization devoted to funding scientific research in the rapidly expanding field of tick-borne diseases. It aims to advance scientific understanding of these complicated infections by sponsoring innovative research at premier institutions throughout the world.

The NRFTD was founded in 1999 to address the complex and critical research questions raised by thousands of patients afflicted with emerging tick-borne diseases, including Lyme disease, relapsing fever, anaplasmosis, babesiosis, bartonella and ehrlichiosis. The need for answers has grown markedly as Lyme disease continues to spread throughout the country and as other tick-borne infections have been recognized as public health threats.

For more information about the NRFTD, or to make a tax-deductible donation, please visit www.nrftd.org.

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