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## AMERICAN SOCIETY OF TROPICAL MEDICINE AND HYGIENE

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### **INSECTICIDE-TREATED MOSQUITO NETS (ITMNs) HIGHLY EFFECTIVE IN PREVENTING JAPANESE ENCEPHALITIS**

**Deerfield, IL (March 8, 2011)** – A new study revealed that using treated mosquito nets could drastically reduce the transmission of Japanese Encephalitis (JE) to humans. The study, conducted by the Regional Medical Research Centre (RMRC), Dibrugarh, North East Region (NE), Indian Council of Medical Research and released in the March issue of the [\*American Journal of Tropical Medicine and Hygiene\*](#), showed that the use of insecticide-treated mosquito nets (ITMNs) on humans and pigs reduced transmission of JE 72 percent in humans.

The study looked at the effectiveness of using ITMNs to protect both pig and human populations. It evaluated the efficacy of reducing the transmission of JE in areas where high virus activity has been reported. The JE virus multiplies rapidly in pigs, considered by experts to be a key element in the natural cycle of the virus and its transmission to humans.

Sharp drops in infection rates were found in three locations following the use of ITMNs. In one location, the nets were used to protect both humans and pigs which resulted in the greatest drop in infection rates (72 percent), compared with areas where treated mosquito nets protected only humans (67 percent) or pigs (56 percent).

“We are pleased that the results of this study show that ITMNs are extremely effective against JE,” said Prafulla Dutta, Scientist, RMRC, NE, “Educating people in JE-prone areas that using ITMNs will help reduce the transmission of the disease without disturbing social customs in these communities. We believe that this will, in turn, reduce mortality associated with JE while keeping communities healthy and productive, further improving the global economy.”

JE is a viral disease transmitted by mosquitoes that infects both animals and humans. It is the leading cause of viral encephalitis (infection of the brain) in Asia and is estimated to be fatal in 30 percent of cases. Death as a result of JE is particularly high among children, killing approximately 8,000 children yearly.

“Increasingly, ITMNs have been shown to be an easy-to-use and effective tool in preventing mosquito-borne diseases such as JE, lymphatic filariasis and malaria,” said Peter J. Hotez, MD, PhD, President, American Society of Tropical Medicine and Hygiene. “This simplicity of action, combined with its low cost, drives the absolute necessity for distribution of these life-saving devices on a much larger scale.”

The researchers note that insecticide components, particularly pyrethroids, are gaining importance in mosquito control because of their low toxicity towards mammals and the strong repellent impact on mosquitoes.

#### **About the ASTMH**

[The American Society of Tropical Medicine and Hygiene](#), founded in 1903, is a worldwide organization of scientists, clinicians and program professionals whose mission is to promote global health through the prevention and control of infectious and other diseases that disproportionately afflict the global poor.

#### **About RMRC**

Regional Medical Research Centre-Dibrugarh is an apex medical research organization headed by Jagadish Mahanta, MD, Director, catering the health research needs in Northeastern States of India.

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