



Novel Recombinant Chikungunya Virus Vaccine Shown to be Safe and Effective in Multiple Animal Models

- Preclinical Data Presented at American Society of Tropical Medicine and Hygiene -

Fort Collins, CO and Atlanta, GA – November 4, 2010 – Inviragen, a biotechnology company developing vaccines to protect against infectious diseases worldwide, together with investigators at the University of Texas Medical Branch (UTMB) and the Division of Vector Borne Diseases (DVBD) of the Centers for Disease Control and Prevention, will make an oral presentation today at the annual [American Society of Tropical Medicine and Hygiene](#) (ASTMH) meeting on preclinical results of the Company's experimental chikungunya virus (CHIKV) vaccine. Data presented here demonstrate that the vaccine is safe and generates protective immune responses after a single dose in several validated animal models of CHIKV infection. The meeting is being held from November 3-7, 2010 in the Marriott Atlanta Marquis Hotel in Atlanta, Georgia.

"These results are very promising and support our plan for further development of this experimental CHIKV vaccine," commented [Dr. Jorge Osorio](#), Inviragen's Chief Scientific Officer. "In 2011, we plan to complete the ongoing animal model studies, the manufacturing and the preclinical safety testing needed to initiate human clinical trials."

This experimental CHIKV vaccine was initially constructed by Ilya Frolov, Ph.D., Scott Weaver, Ph.D. and colleagues at UTMB by making defined alterations in the regions of the CHIKV genome that control viral gene expression. The resulting recombinant virus is genetically stable, shows reduced replication in host mammals, and is unable to replicate in mosquitoes, the vector for chikungunya transmission. The CHIKV vaccine candidate was tested by scientists at Inviragen, UTMB and DVBD in multiple mouse models of CHIKV infection. The vaccine was found to be safe and immunogenic generating neutralizing antibody responses after a single administration. 100% of mice immunized with the CHIKV vaccine candidate survived, showing no clinical signs of disease following challenge with wild type or mouse-adapted CHIKV.

"No approved treatment or vaccine currently exists for CHIKV, which causes debilitating disease in millions of people in India, Southeast Asia, Africa and recently in Europe," said Dr. Scott Weaver, director of the Institute for Human Infections and Immunity at UTMB. "A safe and effective vaccine could limit the worldwide spread of this virus."

The oral presentation of these preclinical results, entitled "Novel Chimeric Vaccines for Chikungunya: Immunogenicity and Efficacy Studies in A129 Mice" will be presented at the ASTMH annual meeting on November 4, 2010 at 1:30pm ET in Scientific Session 39, "Viruses I" by Dr. Charalambos Partidos, Senior Scientist at Inviragen.

The ASTMH annual meeting draws more than 3,500 global health professionals from around the world, and features more than 1,000 scientific presentations.

About Chikungunya

[Chikungunya](#) (CHIKV) is a mosquito-borne virus that can cause fever, headache, fatigue, nausea, vomiting, muscle pain, rash and joint pain in those infected. Approximately 30% of patients experienced incapacitating joint pain, or arthritis that may persist for weeks, months, or in some cases years. On rare occasions, CHIKV infection may lead to neurologic and hepatic disease with high illness and mortality rates. CHIKV is considered endemic in 34 countries in Europe, Australia, Asia and Africa. For more information on CHIKV, visit the [Division of Vector-Borne Infectious Diseases](#) of the Centers for Disease Control and Prevention.

About Inviragen, Inc.

Inviragen is focused on developing vaccines to protect against infectious diseases worldwide. Inviragen's lead product candidate is a vaccine to protect against dengue fever. Inviragen is also developing vaccines to protect against hand, foot and mouth disease and Japanese encephalitis, both of which affect millions of children in Asia. Vaccines in preclinical research stages include a chikungunya vaccine, a low-cost human papilloma virus vaccine, vaccines to protect against new forms of influenza, a vaccine to protect against West Nile and a combination plague/smallpox vaccine for biodefense. Inviragen has offices in Colorado, Wisconsin and Singapore. Please see www.inviragen.com for more details.

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