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Vaxin Wins Navy Grant to Develop Vaccine for Dengue Fever

Birmingham, AL - June 11, 2001--- The world's most common mosquito-borne viral disease is the target of a new Navy grant to Vaxin, Inc. The Small Business Innovation Research grant provides \$69,700 to develop a DNA needleless vaccine to battle dengue fever, a common ailment that can disable troops sent to tropical locales. The carrier mosquitoes have also been found in the Southeastern U.S. with outbreaks as recently as 1999 in Texas.

WHO estimates that 2.5 billion people are at risk for dengue fever. Globally 50 to 100 million cases occur with hundreds of thousands of the deadlier version of dengue hemorrhagic fever (DHF). In the U.S., a Texas girl died from DHF in 1999 and 29 other cases were reported in the state. Between 1977 and 1994, there were 2,248 suspected cases and 481 confirmed in the U.S. according to the CDC. The disease is most common in Southeast Asia and other tropical countries. In the U.S., carrier mosquitoes have been found in Florida, Georgia, Louisiana, Alabama, Mississippi, and Texas.

"There are so many people in the world who suffer from this disease, we are excited to work on such a universally beneficial project. There is also so much risk to our national security when soldiers sent to the tropics get sick from this disease. In days, a whole unit can be neutralized. It is an excellent project and we hope to develop a vaccine where one has never been successful before," says Felix Siegel, Ph.D., principal scientist at Vaxin, Inc.

Currently, there is no satisfactory vaccine to protect from dengue fever, which causes debilitating high fever, severe joint and muscle pain, nausea, vomiting and a rash. Symptoms may last 10 days and full recovery requires two to four weeks. Only 5% of the cases are fatal, mostly young adults and children. In DHF, the results can be more severe and can lead to circulatory failure, shock and death. One of the problems with vaccine development is that repeated exposure appears to heighten, rather than lessen the severity of the infection.

Vaxin, Inc. is a vaccine delivery company with a patented non-invasive (injection-less, needleless) technology for applying vaccines onto the surface of the skin. Founded in 1997, Vaxin has developed a vaccination by topical application of vaccines to the skin. The technology was developed at the School of Medicine at the University of Alabama at Birmingham by scientific founders De-chu Christopher Tang, Ph.D. and Associates.

Studies show the skin is an immuno-competent area of the body, making it an effective place to receive immunizations. EasyVax™ vaccines are administered by applying a patch onto the skin. These vaccine patches will not require refrigeration, allowing worldwide distribution in developing and developed countries. These vaccines only contain selected genes from the pathogens, which means a reduction of side effects and no chance of disease or infection.

Additional Information About Vaxins Needleless Vaccine Delivery:

- The vaccine requires no refrigeration, greatly benefiting third world countries
- Disease and biohazard risks from shared or used needles are eliminated
- 85 million people in the U.S. receive annual immunizations, plus millions in other countries 375 million children need vaccinations, according to UNICEF figures
- Vaxin was recently awarded \$500,00 for pre-clinical development and clinical testing of a tetanus vaccine
- UAB has previously granted a \$210,000 grant from the Army to study a vaccine for breast cancer as part of Dr. Tangs research
- The technology was discovered in UABs laboratories and is owned by the university.
- The technology has been licensed exclusively to Vaxin Inc.

Note: The University of Alabama at Birmingham is a separate entity from the University of Alabama and should be referred to by its entire name, University of Alabama at Birmingham or the acronym UAB.