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Navy Awards \$3.5 Million to Develop Needleless Vaccination

Birmingham, AL - September 14, 2001 --- Painful needle sticks could end for thousands of military personnel who are sent to foreign soils with plenty of vaccination protection. The University of Alabama at Birmingham (UAB) and Congressman Spencer Bachus announce a Federal appropriation in the amount of \$3.5 million for the establishment of a research laboratory for working on topical vaccine technology.

"By supporting this pioneering research at UAB, we can revolutionize the way vaccines are given. We can eliminate the need for needles and syringes and the accompanying pain. We can take a giant step toward solving the problem of medical waste disposal. And all this research could someday lead to the increased use of vaccines to immunize everyone -- especially children and the elderly -- from deadly and debilitating diseases," said Representative Bachus (R-AL).

The new Vectored Vaccine Laboratory will be directed by Dr. De-chu Tang at UAB. Tang (pronounced TAN) has a part-time appointment in the Department of Dermatology at UAB and is the Chief Scientific Officer of Vaxin, Inc, a Birmingham Alabama company which has licensed the new technology.

"It's wonderful that Dr. Tang will now be able to pursue what could be a major advance in vaccine technology. This project is a major focus of our department and we will provide full support for this novel endeavor. The Department of Dermatology is dedicated to the development of state of the art research that betters the health of the patients we serve," says Craig A. Elmets, M.D. chairman of the Department of Dermatology at UAB and a renowned dermal immunologist.

The new lab will continue Dr. Tang's development of a painless method of protecting against infectious diseases. His system works by applying a synthetic virus to the skin surface and then covering it with a protective patch. This technology could save countless military lives by its ease of use in the field: it should not require refrigeration or skilled personnel to administer. It could also be a boon to vaccination compliance around the world. Millions of people who avoid vaccination because of the pain a needle, might find immunization to be a pleasant experience using the technology of Dr. Tang.

"The skin is a constant mobilized biological army poised on the border to prevent infection. The skin is the first interface with environmental. We found that the skin gives us a potent immune response without the necessity of penetration," Tang says.

The research money was part of the Department of Defense's appropriations bill and is directed through the Office of Naval Research. Under the terms of the grant, the money will be used to forward research at UAB, aid development at Vaxin, and fund preclinical research at the Navy's Department of Infectious Diseases. Under the contract with the Office of Naval Research, Tang

and his UAB colleagues will continue their research to develop this unique technology. Their goal is to increase the efficacy of vaccines administered through topical application. Vaxin, Inc. has responsibility for the developmental aspects which includes preparation of the technology for commercialization. The Navy will also provide critical data in primates according to a Cooperative Research and Development Agreement with Vaxin.

Vaxin has developed experimental vaccines against influenza, tetanus and breast cancer. Several vaccines under development are of interest to the military to protect personnel and travelers. These new projects include research on topical vaccines for malaria, dengue fever, tetanus and rabies. Last year, Tang was honored as the recipient of the prestigious Coulter Award as innovator of the year. This award, in the amount of \$100,000, was given by the Coulter Foundation and presented by the Georgia Institute of Technology.

Additional Information:

- ✍ No special training is needed to administer the vaccine
- ✍ The vaccine requires no refrigeration, greatly benefiting third world countries
- ✍ Disease and biohazard risks from shared or used needles are eliminated
- ✍ Dr. Tang's technology is named Easyvax
- ✍ 85 million people in the U.S. receive annual immunizations, plus millions in other countries
- ✍ 375 million children need vaccinations, according to UNICEF figures
- ✍ Tang's UAB lab has also been granted a \$210,000 grant from the Army to study a vaccine for breast cancer
- ✍ An immune response has been elicited in mice, rabbits and primates
- ✍ FDA approval for human trials are pending
- ✍ The technology was discovered in UAB's laboratories and is owned by the university.
- ✍ The technology is licensed for marketing by Vaxin, Inc., a company Tang co-founded

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.