

Vanderbilt Vaccine Center

Taos students seek local residents exposed to Hantavirus

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http://www.taosnews.com/news/article_075ef2f8-2660-11e5-b840-378f90306c21.html (http://www.taosnews.com/news/article_075ef2f8-2660-11e5-b840-378f90306c21.html)

A group of Taos area students is helping researchers at Vanderbilt University with a bit of medical detective work this summer: tracking down Hantavirus survivors in Northern New Mexico.

A severe respiratory illness that can be deadly, Hantavirus directly effects more people in New Mexico than any other state in the U.S. One woman in Taos County was diagnosed with the disease this year.

As part of Vanderbilt University's Aspirnaut Summer Research Internship Program, four local students are helping prominent doctors at the school obtain blood samples from survivors for a clinical trial intended to develop treatments.

"We're trying to spread the word and get people to donate blood to create antibodies so hopefully there can be a cure," said Francisco Martinez, a recent Taos Cyber Magnet School graduate entering the University of New Mexico who is helping with the study while spending part of his summer at Vanderbilt University in Tennessee. "If people don't donate blood, we hope they'll at least learn how to prevent the disease."

Meanwhile, three other local students — Katie Emery, Maravel Payne and Giovanni Zepeda — are reaching out to doctors and medical service providers to burnish interest in gathering samples.

Blood collected from Hantavirus survivors in Northern New Mexico could give researchers at the Vanderbilt Vaccine Center a better understanding of the disease.

The Vanderbilt Vaccine Center is one of the nation's leading sites for the developing of neutralizing antibodies for the treatment of severe viral infections.

Much like with the development of "anti-venoms" for treating snake bites, researchers at Vanderbilt have perfected techniques for taking non-infectious blood from the survivors of severe viral infections and isolating those antibody molecules that allowed those patients to survive, according to Martinez.

Those antibodies can then be produced in the laboratory and used as drugs to treat infections, he explained.

The project's long-term goal is the development of new therapeutics for the treatment of Hantavirus infection.

The clinical trial organized by Dr. James Crowe is seeking healthy adults 18 years of age and older. Study participants will be sent a kit which a medical professional in Taos can use to draw blood. The sample will then be sent to researchers at Vanderbilt Vaccine Center.

Study participants will be compensated.

Anyone interested in participating is encouraged to call (615) 343-8010 or send an email toclinicaltrialscenter@vanderbilt.edu (<mailto:toclinicaltrialscenter@vanderbilt.edu>).

Meanwhile, the four students from Taos are getting hands-on experience in state-of-the-art medical research techniques.

The Aspirnaut Summer Research Internship Program, founded by Dr. Billy Hudson, is a hands-on and mentored basic science research laboratory experience for students interested in a career in medicine or biomedical research. The program is supported by the National Institutes of Health and recruitment is targeted to students underrepresented in the sciences, such as those from rural communities like Taos.

Facts about Hantavirus:

What is Hantavirus Pulmonary Syndrome?

Hantavirus Pulmonary Syndrome is an illness caused by a family of viruses called hantaviruses, which cause a rare but very serious illness of the lungs.

What are the symptoms of Hantavirus Pulmonary Syndrome?

Symptoms usually start two weeks after exposure. Symptoms initially include fever, tiredness and muscle aches. Headache, dizziness, chills, nausea, vomiting, diarrhea and stomach pain are not uncommon. After a few days, the infected may start coughing and experience difficulty breathing, which can progress to respiratory failure and death. In some cases, the kidneys and other organs will stop working.

How does someone contract Hantavirus Pulmonary Syndrome?

The disease is most commonly spread through contact with the feces or urine of infected mice. Hantavirus can also be contracted through a mouse bite.

Hantavirus cannot be transmitted between people.

Who gets Hantavirus Pulmonary Syndrome?

Anyone who lives in an area where mice are found can get Hantavirus. This includes all parts of New Mexico.

What treatment is available?

There is no specific treatment for Hantavirus Pulmonary Syndrome but early intensive hospital care can be life-saving.

How can I protect myself and my family from getting Hantavirus Pulmonary Syndrome?

Do not sweep or vacuum up mice feces and urine but spray it with ready-made disinfectant. Alternatively, spray it with a mixture of bleach and water (10 cups of water for each cup of bleach). While wearing rubber gloves, wipe up the feces and urine with a paper towel. Throw away the paper towels and wash hands immediately.

Keep your home clean to discourage rodents by promptly washing dishes, cleaning counters and floors, storing food and garbage in containers with tight lids and storing pet food away at night.

Seal holes inside and outside your home that mice may use to get inside. Rodents can squeeze through holes as small as a dime.

Set traps inside your home and clean up dead mice safely by spraying the dead rodent with the ready-made disinfectant, place it in a plastic bag and burying it or throwing it away. Wash your hands immediately afterwards.

Control mice outside your house by clearing berms and away from the foundations of buildings, placing woodpiles and garbage as far from homes from possible and get rid of junk that can provide homes for rodents.

Avoid disturbing or sleeping near rodent droppings or burrows when camping. Avoid sleeping on bare ground; use a mat or elevated cot if available. Store foods in rodent-proof containers and promptly throw away, bury or burn all garbage.

