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Hantavirus: Hantavirus is National News after Gene Hackman's Wife Died from Hantavirus

Hantavirus was first described in China in 1000 A.D. In the 1950s, the disease appeared in 3,200 American soldiers in Korea. Doctors described it as hemorrhagic fever with renal symptoms (hfrs). It would be over twenty-five years before its cause, Hantavirus, was elucidated and found in the United States.

The virus was named after the Hantaan River in Korea, the site of a 1950s outbreak, but much later it occurred in the United States and became New World Hantavirus. In the U.S., it presented with pulmonary symptoms, hence the name, Hantavirus Pulmonary Syndrome (hps). By 2009, over 700 people were diagnosed in America. Nevada State Medical Association President Dr. Brian Callister documented Nevada's first case, and Dr. Stephen St. Jeor at the University of Nevada, Reno School of Medicine (UNR Med) led the way with research.

In 1994, Dr. Stephen St. Jeor at the School of Medicine became interested in Sin Nombre Hantavirus. He learned about the virus from a friend, Dr. Stuart Nichole, who was in the special pathogen branch of the cdc. Dr. Nichole and colleagues discovered the virus in a deer mouse. St. Jeor and Nichole received a grant to determine virus transmission and investigate a possible vaccine. St. Jeor found the virus in 40 percent of deer mice in Nevada. He also found that workers at Truckee Meadows Community College in Reno had a terrarium of deer mice in their lunchroom.

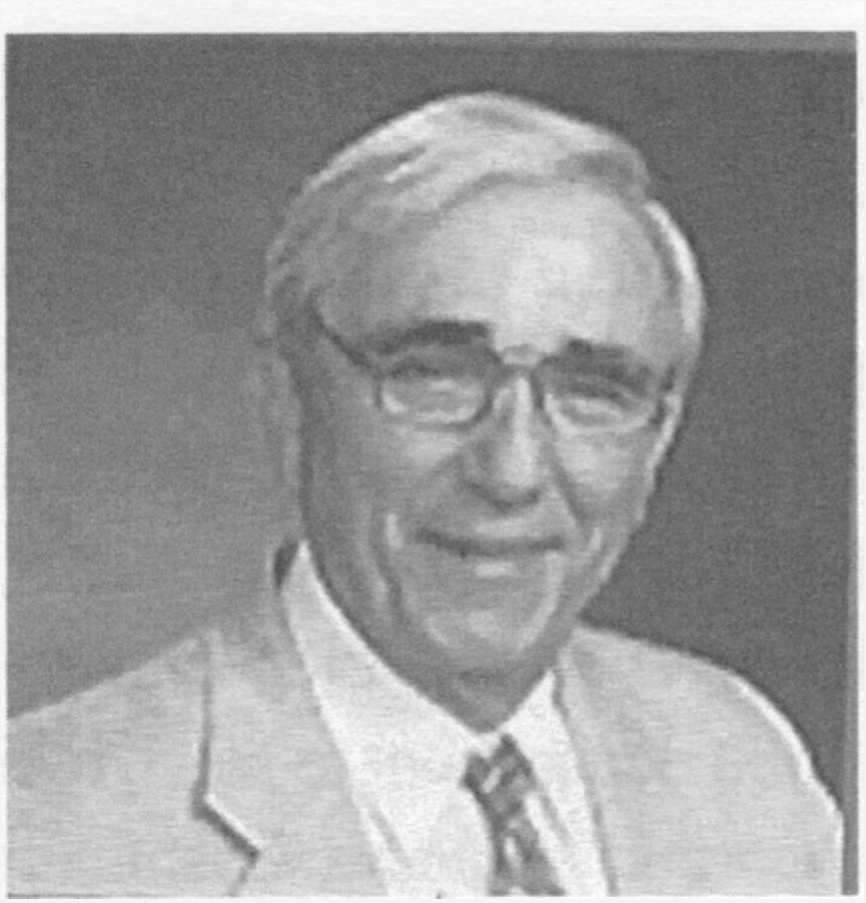
Approximately twenty percent of the mice harbored Hantavirus; however, not one worker had the virus antibody. Even more interesting, the deer mice had been together for several

months, but they did not have close to a one hundred percent infection rate as might be expected in animals living together in a cage.

In a closer-to-home tragedy, in the early 1990s, two faculty members in the College of Agriculture at the University of Nevada, Reno contracted HPS; one recovered but sadly the other died. When one looks at the difference in transmission statistics in the United States, the presence of Hantavirus in at-risk individuals (forest workers and mammologists) is very low compared to the carrier rate of the virus in deer mice. However, at-risk-individuals in Europe have a much higher infection rate than U.S. workers adding to the mystery in differences in spread and immunity. Initially, evidence of the virus was found in salivary glands and kidneys but could not be grown in the laboratory.

The Sin Nombre strain of Hantavirus is present in the United States, and while it may not be widely reported in the news, it is still taking lives. In 2010, five children from Four Corners developed hps and one died. All five lived or played in areas near deer mice. The Sin Nombre virus is in Nevada, but if it will ever cause a large number of infections like the Old World hhrs strain is uncertain. One thing is clear, to prevent this disease one needs to avoid areas where rodent's droppings can be aerosolized.

The hps virus-carrying deer mouse is brown, unlike the common gray-colored house-mouse found throughout the world.



Ronald Pardini, Ph.D.

"THE BEST OF THE BEST"

Professor Emeritus

UNR Med 1968-2018

College of Agriculture Biotechnology and Natural Resources (CABNR)

Agricultural Award for Excellende in Leadership

Chair, U.S. Depart. of Agriculture (USDA)

Experiment Station Committee on Organization and Policy

The following **updated and edited article** on Ronald Pardini, Ph.D., is originally from ***Build It & They will Come: An Anthology by Retired Faculty of the University of Nevada, Reno*** a book dedicated to faculty, staff, students, and

interested citizens whose foresight, persistence, resources, and patience continually recreated UNR since 1874 and memorializes its 150th anniversary."

Build It & They Will Come

HOWARD BUILDING - A COLLABORATION BETWEEN AGRICULTURE AND MEDICINE

Roger Lewis and I were walking in the Hallway of the Manville Building in the School of Medicine when we noticed a visitor in the hallway who was obviously an outsider, so we asked him if we could assist him. We were surprised when he replied: Yes, my name is Claude Howard: I'd like to donate to the School of Medicine to construct a new medical research building at the University. He carried with him a shoebox with newspaper clippings about the University's medical school and its development, showing his long-standing interest in the development of the medical school. We immediately escorted him to the dean's office to complete the transaction. The dean called Development Officer Edna Brigham, to consummate the gift.

The construction process was initiated by forming a committee to provide insight into the design of the new research building. As the planning proceeded, the biochemistry department had a research endowment account from the sale of stock that was created through a research contract to develop topical medications from natural resources. I, as the Principal Investigator (PI), offered to create a natural products research laboratory to extend the Howard Building by one lab on the first floor, which created an open space on the second floor. This was and continues to be used as an informal conference room utilized for various activities such as journal clubs, graduate student completion celebrations, research lab conferences, departmental gatherings and a variety of miscellaneous activities. The space was informally named: Edna's-Bar-and-Grill by the faculty because of her development accomplishments and her involvement in the Howard Building donation. The Natural Products Lab included a full research lab, office space, cell culture lab, and an equipment facility that included Gas Chromatography-Mass Spectrometer (GCMS), which provided technical support to campus. It was later converted to an athymic mouse facility which served to the medical school 's cancer research. The collaboration between the COA, Nevada Agricultural Experiment Station (NAES) and UNR Med began with the creation of the University's medical school. The COA/NAES and UNR Med established jointly supported faculty positions for the biochemistry

department, one of the first fully established basic sciences departments in UNR Med. The Biochemistry Department supported the agricultural teaching and research as well as medical school teaching and research missions. This department was administered by both deans, including faculty evaluations, promotions, faculty space allocation, and one biochemistry administrative office. It was a financially efficient way to create one joint department to serve two colleges instead of creating two departments, which was critically important to the establishment UNR Med.

During the initial construction of this first medical school building, the NAES under the leadership of Dale Bohmont partnered with Dean George Smith, to provide funding from the NAES to help build the Anderson Building in UNR Med. The resulting collaborative spirit was the underpinning of extensive collaborations between agriculture and medicine which included joint faculty appointments, jointly funded research and the development of multi-supported graduate programs like Cellular and Molecular Biology. The joint Biochemistry Department was assigned to the first floor of the Howard Building.

Note: Claude Howard was an unassuming philanthropist who owned the Camelot Health Spa in Las Vegas and made his fortune by building more than 4,000 apartments in southern Nevada. During his lifetime he donated $20 million to a variety of statewide institutions including $6 million to UNR Med. He was quoted as saying: As long as I make money, I'll give it away. He passed away in 1998 at the age of 92.

Left: Claude Howard, Edna Brigham, Dean Bob Daugherty

Joan S. Zenan

Former UNR Med Librarian

Joan S. Zenan passed Away February 27, 2024, age 84

Donations may be made in her memory to University of Nevada, Reno Foundation for the Joan Zenan Special Collections Endowment (www.unr.edu/giving)

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