$100,000 Grant Received for Stem Cell Cancer Research

Two researchers at the Kansas State University College of Veterinary Medicine have received a $100,000 grant to research stem cell therapy in the treatment of lung cancer. The grant was awarded by Joan's Legacy: The Joan Scarangello Foundation to Conquer Lung Cancer.

The pioneering research being conducted by Drs. Masaaki Tamura and Deryl Troyer involves using stem cells to safely deliver therapeutic drugs to cancerous lung tumors.

The research is unique to K-State in several ways. The stem cells used in this research were discovered in the cushioning material, or matrix, of the umbilical cord. K-State scientists from the colleges of Veterinary Medicine and Agriculture discovered the cells in the umbilical cords of both humans and animals. Because these adult stem cells are harvested from a tissue that is typically discarded, they are non-controversial, and they can be collected in large numbers inexpensively.

Dr. Troyer, one of the original matrix stem cell discoverers, said in mice the matrix stem cells have shown to successfully deliver the anti-cancer drug interferon beta to the intended tumors. “We’ve gotten very dramatic responses,” he said. “A high percentage of the stem cells migrated to the cancer and delivered the therapeutic payload of the interferon treatment. In our experiments this procedure slowed tumor growth and even reduced their size.”

Dr. Tamura has researched carcinogenesis of tumors of the lung and colon for six years and understands the need for a cure. “Mortality of lung cancer is enormously high. Only 15 percent of those diagnosed with lung cancer will survive five years. It’s a very serious disease.”

According to national cancer statistics, 160,000 people die from the disease this year in the United States. The Joan's Legacy Cancer Foundation is committed to fighting lung cancer with innovative research and increasing awareness of the disease, with a focus on non-smoking related lung cancer.

Joan’s Legacy was established in honor of Joan Scarangello McNeive, a 47-year-old non-smoker and New York writer who died in 2001 after a long battle with the disease.

Drs. Tamura and Troyer’s research will also involve a subtype of lung cancer called bronchioloalveolar carcinoma, the cancer that McNeive suffered from. This typically strikes middle-aged women who are non-smokers and is especially difficult to treat.

The researchers plan to test the interferon beta therapy in combination with other chemotherapy drugs and new immune system enhancing compounds.
New Poisonous Plant Diagnostic Available

A new assay for the identification of poisonous plant fragments is available at the Toxicology Section of the Veterinary Diagnostic Laboratory. This new technique provides an additional method for obtaining critical information needed to make a diagnosis of acute plant poisoning.

One of the factors that clinicians have to consider when investigating cases of suspected plant poisoning is whether or not the animal actually consumed poisonous plants in the pasture or from a different feed source such as hay.

Identifying poisonous plants from plant fragments found in the digestive tract provides proof that the animal consumed poisonous material.

It adds to the likelihood of arriving at a correct diagnosis of acute plant poisoning. The assay is based on the microscopic examination of plant fragments found in rumen contents. This technique offers insights into possible plant poisonings in cases where the clinical signs and post-mortem lesions are insufficient to make a positive diagnosis.

The technique is most useful when death occurred within a short time of ingestion, because fragments of the plants that caused the poisoning are still present in the digestive tract. This diagnostic approach requires a specialized set of skills and instrumentation and, it is offered by few other diagnostic laboratories.

To make use of the service, about a pound of rumen contents should be placed in a leak proof cold pack and submitted to the Diagnostic Laboratory.

Lifelines Gets New Editor

As of this issue, Lifelines has a new co-editor. Since Sarah’s graduation in December, Christina McCall has joined the staff and will pick up with the duties of helping design and write for the newsletter.

Christina is a freshman majoring in mass communications and minoring in leadership studies.

You will be getting your monthly request for announcements from Christina so please keep them coming!

“As the new co-editor of Lifelines, I look forward to meeting and working with everyone here at the College of Veterinary Medicine,” she said.
Check it Out at the Library

We received a donation of several scientific books from a corporate library that recently closed, and we have received many items from faculty, students, staff and friends.

Our prices are very reasonable—$5 for veterinary titles, $3 for audio/visual materials, $2 for other fiction or non-fiction hard-cover books, and $1 for paperback and children’s books. Come early for the best selection.

We will also have our silent auction for some of our particularly appealing items. Bargain hunters will like our half-price sale later in the week or the super-bargain “$1 for all you can put in a bag deal” during the final days of the sale.

We will show a daily chart of the amounts we’ve received, and we will list the technology equipment that we will consider for the library’s technology program.

Biochemistry Professor from Afghanistan Visiting CVM

Exchange program gives Afghanistan native chance to observe teaching styles and methods at K-State

You may have seen a new face in the halls of the veterinary campus this semester. Dr. Nasrin Stanikzai, a professor of biochemistry at Kabul University in Afghanistan, is spending two months at the CVM as part of an exchange program between K-State and Kabul University.

The connection was begun last summer when Dr. Walter Renberg, Clinical Sciences, and Dr. Chris Ross, A&P, traveled to Kabul to meet with professors there and explore opportunities for collaboration.

In Afghanistan, Dr. Stanikzai teaches students in their second year of veterinary classes at Kabul University. Depending on the year, she has 80 to 100 students.

While at K-State, she hopes to learn some teaching techniques that she can use in her classes. “I want to know the methodology of teaching here and how to use new technology in teaching,” Dr. Stanikzai said.

Due to a long civil war and subsequent rule by the Taliban government, Dr. Stanikzai said women were not allowed to teach from 1991 to 2001. When the United States invasion ended the Taliban rule, there were new opportunities, but the country was devastated by many years of war.

Kabul University is trying to recover by acquiring basic lab supplies and books.

“The books that were written by other professors were destroyed by war. Now there is a new need to retranslate new books for my students,” she said.

K-State is involved in a campuswide exchange program with Kabul University in an effort led by Yar Ebadi, dean of the College of Business and an Afghanistan native.

To read more about Drs. Renberg and Ross’ trip to Afghanistan, see the July 2006 issue of Lifelines.

Lifelines is published each month by the Development and Alumni Affairs Office at the College of Veterinary Medicine. Editors are Brennan Engle and Christina McCall, bengle@vet.k-state.edu, cmccall@vet.k-state.edu.
Asheni completes training

In December, a going-away party was held for Asheni, a black Lab trained by Dr. Patricia Payne, DM/P, for KSDS.

KSDS trains 40 canines annually to assist the visually impaired or physically disabled.

Asheni began her training a year-and-a-half ago, when she was eight weeks old.

She was sponsored by the Veterinary Medical Teaching Hospital, which performs physical examinations; and Hill's Pet Nutrition, which sponsored a food study for her. Asheni accompanied Dr. Payne everywhere including her daily classes and on special trips to Minneapolis, St. Louis and Santa Barbara.

Because of the significant amount of time Dr. Payne spent with Asheni, she is having “puppy withdrawals,” but she will get a new puppy soon and begin the training process again.

Dr. Payne said the training would not be possible without the backing of the College.

“Everyone from the janitorial staff to the administration has been very supportive of this program,” she said.