

**Report on the Minnesota Alpaca Expo Gift to the
University of Minnesota College of Veterinary Medicine
August 10th 2011**



Since 2008 the organizers of the annual Minnesota Alpaca Expo have held an annual silent auction to raise funds that are used to benefit the health and well being of the alpaca. This gift helped establish the *Alpaca Support Fund*, which supports faculty, students and staff who are treating and doing research in alpaca health. We are incredibly grateful for your support and the continuation of this relationship is important to the College of Veterinary Medicine.

The funds gifted to date have been used to improve the hospital's examining areas and stalls and to purchase equipment needed for the treatment and handling of alpacas at the Veterinary Medical Center and also for teaching veterinary students. They have also contributed to development of special diagnostic tests, that were previously unavailable, to enable us to better diagnose and treat diseases in alpacas. Funds have also been used to study local diseases affecting alpacas, and most recently the funds were used to help support a large animal resident through her training to become a specialist in large animal internal medicine.

Details of the use of these funds to date follow below:

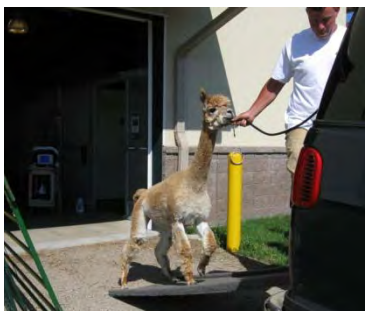
1. Improvement of facilities for the Veterinary Medical Center:

- a. Rubber flooring of camelid work up area to improve traction
- b. Painting of camelid work up area
- c. Weighing scales
- d. Bair hugger warming device for efficient warming of hypothermic patients
- e. Gates for stalls - to safely separate individuals requiring treatment from their healthy companions
- f. Camelid equipment – halters, muzzles, stock straps, blankets/coats
- g. Show mats – for stalls
- h. Outdoor pens to allow turnout and grazing
- i. Intravenous infusion equipment for rapid resuscitation of crias and sick adults
- j. Uterine biopsy forceps for reproductive workups
- k. Endoscopy equipment

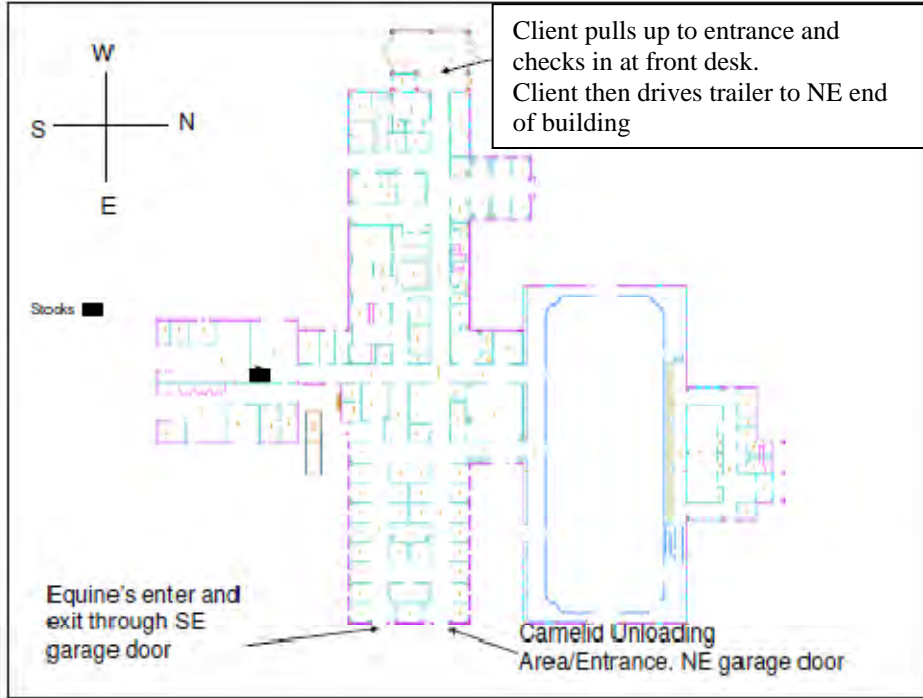


In May 2011, the majority of the camelid admissions were moved to the Piper Clinic in order to improve efficiency in care of our more critical patients. Currently, dermatology and ophthalmology appointments, and isolation cases are seen at the Large Animal Hospital. All other camelid cases, such as those requiring intensive care or surgery, are hospitalized at the Piper Clinic. An area of the Piper Clinic has been reserved and modified for use by camelid patients. Two stalls are reserved and the area is separated from the rest of the hospital by partitions, to allow privacy for the camelid patients. A storage room is available locally for camelid equipment, separate from the rest of the clinic. The stalls are located at an entrance to the clinic making loading and unloading of the animals especially easy and low-stress. The stalls are bright and airy and have large windows providing daylight and ventilation, and there is an area available outside for camelids to have turnout time and grass access. Our alpaca clients who utilize our hospital services have been very pleased with these changes. All the equipment purchased with Alpaca Expo donation funds was moved to this area and is kept in the camelid storage room.

Photographs of the Piper Clinic Camelid area:



Plans for Camelid Admissions at the Piper Clinic



2. Improvement of clinical laboratory tests:

- a. Collection of blood samples to develop normal blood work ranges for alpacas
- b. Development of assays designed to measure blood fat levels to improve management of sick alpacas when hospitalized.

3. Diagnostic Ultrasound machine for use on camelid ambulatory rotation

The diagnostic ultrasound unit is kept in a separate area and used on multiple teaching rotations.



4. Dr. Kate O'Connor:



Dr Kate O'Connor

Contributions from the Minnesota Alpaca Expo are helping to fund a residency program in Large Animal Medicine for Dr Kate O'Connor. Dr. O'Connor was selected by the faculty for the position of Large Animal Medicine Resident which started July 1st 2011. Dr. O'Connor graduated as a veterinarian from the University of Minnesota in 2010, completed a large animal internship at the College of Veterinary Medicine in June 2011 and has a strong interest in camelids. During her residency Kate will be working towards obtaining a specialist qualification in large animal internal medicine (Diplomate of the American College of Veterinary Medicine) and pursuing a Master of Science degree. Dr. O'Connor has been a wonderful asset to the hospital and her strong knowledge and skills in camelid medicine have been a great resource for our alpaca

clients. She has already given presentations to local camelid owners at the Minnesota Alpaca Expo and during our first Camelid Health Conference.

Kate has been successfully accepted into the University Of Minnesota Graduate School and will be undertaking a Master of Science degree during her residency. Her Master's research will involve a descriptive study of camelid necropsy submissions to the University of Minnesota Veterinary Diagnostic Laboratory, which will give us new information on which diseases are most common to camelids in this area. Secondly, she will be undertaking a study of how camelid physiology is involved in the development of fatty liver disease, to enable us to develop better treatment strategies. This second project is funded by the Morris Animal Foundation.

The Minnesota Alpaca Expo funds contributed part of the cost of three year residency position for Kate. These funds will ultimately produce a much needed local veterinarian with expertise in camelid medicine. We awarded Kate the title of "Minnesota Alpaca Expo Large Animal Medicine Resident" to increase exposure for the Expo and gain greater understanding from alpaca owners as to why the donated funds are so important to us, and how they are being put to good use, by returning the benefit back to the alpaca community in the form of a trained alpaca specialist.

5. Research:

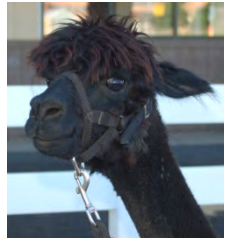
- c. Study of *Anaplasma* infection in local alpaca herds.

Anaplasma phagocytophilum infection has been infrequently reported in camelids although it is very commonly reported in Minnesota and Wisconsin in horses. The signs of this disease are varied but can be serious, and easily be mistaken for other diseases if not diagnosed correctly. An opportunity arose to study an alpaca herd known to be affected by *Anaplasma*. We were able to obtain blood samples to gather information as to how antibodies in alpacas respond to this infection. This knowledge will help veterinarians in their interpretation of these blood tests allowing them to be more accurate in diagnosis of this disease, and thus enable proper treatment to be given to camelids when needed. The initial information we learned has been submitted for publication in a scientific journal (Premature parturition, edema and ascites in an alpaca infected with *Anaplasma phagocytophilum*. Stacy H. Tinkler, Anna M. Firshman, Leslie C. Sharkey). We would like to pursue future study of this disease in alpacas by carrying out a surveillance of antibodies to *Anaplasma phagocytophilum* in alpacas in this region.



Dr Stacy Tinkler

PROPOSED USE OF 2011 AND FUTURE FUNDS



The continuation of this relationship with the Minnesota Alpaca Expo is important to the College of Veterinary Medicine. Despite the recent problems in the economy and its effects on the alpaca industry, the case numbers of camelids seen at the University of Minnesota Veterinary Medical center are the second in number to the equine cases and make up 10-20% of our medicine caseload. Additionally, despite the lower total number of camelids living in Minnesota compared with the West Coast, our current camelid case load is similar to other university hospitals such as Oregon State University. Faculty members at the College of Veterinary medicine are interested in camelids and increasing numbers of veterinary students are keen to become proficient in their care upon graduation from veterinary school. This is demonstrated by the annual increase in numbers of our students choosing to take our camelid teaching rotation. We also have important research on camelid diseases (such as choanal atresia and fatty liver) actively occurring at the College of Veterinary Medicine.

Below we have listed our preference for distribution of the 2011 funds (in order of importance). We have also included proposals for future donations.

1. Equipment needs: \$1800

a. iPad2 for ambulatory camelid work – \$800

The iPad2 will aid us greatly in our teaching of students in several ways. As a record keeping tool, we can record details regarding farm visits including invoices, individual animal records, take and store photos, lab results, and also write and compile follow up reports for owners. This powerful portable tool will enable us to keep better records of all the details during the senior veterinary student rotations where we work with camelids. We will have improved continuity between farm visits by having previous visit records on site at both the herd level and for the individual animal with ongoing issues. The iPad2 will allow us to store reference materials for use in the field, such as text books, journal articles, etc.

b. Microscope for ambulatory camelid work – \$500

A Celestron® LCD Digital Microscope is similar to a conventional microscope except that it uses a 3.5" digital screen for viewing rather than two eyepieces. This allows for multiple people to view the image at the same time. A digital camera is built in so individual images and videos can be captured and stored for future use in presentations and other learning environments. A USB port allows for easy transfer of these images to a computer. Also with digital viewing, additional magnification can be achieved over traditional microscopes (1600x with digital zoom vs. 400x standard magnification). We will be using the microscope to assist in diagnosing skin conditions by looking at skin scrapings, to examine blood smears and to look at fecal samples for presence of parasite eggs.

c. Specialized laryngoscope for anesthesia of alpacas – \$500

Due to the length of the oral cavity of alpacas, a longer than standard laryngoscope is necessary when they are intubated for gas anesthesia. Sometimes general anesthesia

needs to be carried out rapidly in emergency situations (such as for cesarean sections or colic surgery). As most of the alpaca anesthetics are now carried out at the Piper Clinic we are in need of a second long laryngoscope. The current one that the hospital has needs to stay in the large animal hospital for use in cows, sheep, goats and alpacas that are still housed in the old building.

2. Sponsorship of University of Minnesota Camelid Health Conference: \$5000

An important area in the advancement of alpaca health and well-being is the specialized education of veterinarians, veterinary students and owners in medical disorders of these animals. The first Camelid Health Conference organized and conducted by the College of Veterinary Medicine was held in March 2011. Dr. Pat Long was our keynote speaker and feedback shows we had a very successful weekend-long meeting, with approximately 80 attendees over the course of 2 days. Our College's continuing education program has a reputation for providing evidence-based information that is practical and immediately useful to attendees which is the underlying goal of the camelid conference. Our aim is to continue to grow this conference in terms of quality and reputation.

The Camelid Health Conference is aimed at both owners and veterinarians. For 2012 we have lined up excellent speakers: Dr Ahmed Tibary, a world renowned expert and specialist in camelid reproduction, and Marty McGee, an expert in camelid behavior. We will also be holding a small farms business workshop run by the University of Minnesota small farms extension group, for owners. Please see the following link for details:
<http://www.cvm.umn.edu/vetmedce/events/Camelid/home.html>

This conference likely will not be able to continue without support and sponsorship from the camelid community. Yearly sponsorship from the Minnesota Alpaca Expo Silent Auction would allow us to continue to offer an affordable and quality educational opportunity to both owners and veterinarians. Sponsorship ranging between \$3000 and \$5000 would be extremely valuable in our ability to successfully continue this conference. Our plan would be to assign a lecturer of your choice with a title such as "Minnesota Alpaca Expo Speaker" to increase exposure for the Expo and gain greater understanding from alpaca owners as to why these donations are so important, and how they are being put to good use in the education of their veterinarians.

Interestingly, a similar model is used by the Ohio State University in order to support their International Camelid Health Conference, whereby funds are raised during a local alpaca show and are donated in order to support the conference's costs. Please see the following link for details: <http://www.buckeyealpacashow.com/>

3. Support of teaching of faculty, staff and students in alpaca health: \$1350

This category includes the purchase of equipment used to instruct veterinary students in the care of alpacas, funds to help in the costs of transport of students to alpaca farms and funds to allow faculty, staff and veterinary student the ability to attend continuing education events on alpaca health. For the 2012 University of Minnesota Camelid Conference, students attending the conference will be asked to pay a minimal sum to offset the costs of food and proceedings. We would like to request special sponsorship for veterinary students to offset their costs of attending the 2012 Camelid Conference e.g. \$45 each for 30 students. This will increase awareness about the Minnesota Alpaca Expo and its volunteer opportunities among those students with camelid interest.

4. Summer Student Research Opportunity: \$2000

We will identify a student with strong camelid interest that will undertake a half-time project during the summer break. This project could involve the study of clinical cases, a farm management practices survey, parasitism, or the development of educational materials to name a few possibilities. This project would directly benefit Minnesota producers through the production of timely and practical data and information.



Future needs:

Support of new research into areas of interest on alpaca health

Faculty members at the College of Veterinary Medicine collaborate with national and international experts in camelid and human medicine to study disorders of camelid health. We have contributed several papers in scientific journals as well as presentations at international and national meetings. Camelid research is currently focused on metabolic disorders, hepatic lipidosis, thyroid function and choanal atresia. Funding has been awarded from agencies such as the Alpaca Research Foundation and the Morris Animal Foundation. Donated funds are incredibly useful in developing preliminary data required for successful submission of proposals to these agencies for research funding.



Thank you!!

Images from the 1st University of Minnesota Camelid Health Conference 2011

