

**Alpaca Research Foundation Update  
Camelid Community August, 5-6,2006  
Kansas City, MO**

The Alpaca Research Foundation (ARF) was founded by the Alpaca Registry, Inc. (ARI) in December 1997, as a non-profit, 501c(3) organization. ARF became independent in 2003 and continues to grow in terms of the number and quality of projects funded.

The Foundation's MISSION is to encourage and support scientific research which benefits the North American alpaca industry, primarily in the areas of alpaca health and husbandry, genetics and fiber.

**Board of Directors**

Current directors and officers are: Alan (Abe) Rosenbloom, MD, President; Allan Dewald, MD, Vice President; Pat Long, DVM, Treasurer; Roxanna Smolowiti, DVM, Secretary; Karen Baum, DVM; Patricia Craven, PhD and Randall Larson, DVM. Lisa Williamson, DVM has recently been appointed to complete the term vacated by Julie Ann Jarvinen, PhD, DVM.

**Fund raising**

The ARF Development Committee, headed by Deb Hill, was started in 2001 as the first step towards the board's goal of creating a self sufficient research program. Current committee members are Kerry Anderson, president, Ruthanne McCaslin, Peter Canning, Naomi Flam, Tsulan Balka, Rachelle Black, and Lona Nelsen Frank. ARF remains committed to using donated funds solely for the purpose of funding research projects. 100% of donations are applied to fund research. Administrative costs of the Foundation are kept to a minimum and only interest earned on donated funds is used to cover these costs.

**Project evaluation and funding**

Ten new research proposals directly submitted to ARF are currently under consideration for funding in 2006-2007. These proposals, as per routine, each undergo rigorous peer review prior to approval for funding. Frequently recommendations are made to improve project quality which researchers are almost always willing to accommodate. ARF makes available out of cycle project evaluation and consideration for funding for entities of greater urgency. West Nile Virus, Eastern Equine Encephalitis and BVDV infections are recent such examples. Inclusion of camelids other than alpacas in studies is permitted. Frequently, alpaca research results are applicable to other camelids. Thirteen projects were funded by ARF in 2005-2006 including significant contributions to three ongoing Morris Animal Foundation (MAF) projects. Details of these research projects are listed below:

## **ARF-Sponsored Research Projects: 2005-2006**

Confirmation of West Nile Virus Neurologic Disease in Alpacas Using Reverse Transcriptase Polymerase Chain

Michelle A Kutzler, DVM, PhD, DACT Oregon State University 10/01/03 to 03/31/06  
\$7,550

Investigation of Genes Controlling Pigmentation in Alpaca Emilie Campbell, Ph.D.  
Brigham Young University 9/01/04 to 8/31/06 \$12,087.78

Effects of polymerized ultrapurified bovine hemoglobin blood substitute in anemic alpacas.

Susan J. Tornquist, DVM, Ph.D., Dip. ACVP Oregon State University 9/01/04 to 3/31/06  
\$12,387.00

Factors Affecting Measurement of Serum Progesterone Levels in Alpacas Ahmed Tibary  
Washington State University 9/01/05 to 2/28/07 \$6,993.58

Investigate the RNA Sequence and Virulence Factors of a New Strain of Corona Virus in Alpaca

Ling Jin Oregon State University  
9/01/05 to 8/31/06 \$14,506

The Effect of Oral Omeprazole on Third Compartment pH in Clinically Normal Alpacas  
Jennifer Lynn Johnson University of Minnesota 10/01/05 to 11/30/05 \$9,311.00

Mapping the Suri Coat Phenotype

Andrew Merriwether, PhD Binghamton University 10/01/05 to 09/30/06 \$20,186

Bovine Viral Diarrhea Virus in North American Alpaca Herds Clayton L. Kelling, DVM, PhD University of Nebraska 11/01/05 to 10/31/06 \$20,500  
Funded by the Mid-Atlantic Alpaca Association (MaPaca)

An Epidemiologic Assessment of Bovine Viral Diarrhea Virus Infection in US Alpacas  
En-Min(Eric) Shou, MD, PhD and Julie Ann Jarvinen, PhD, DVM Iowa State University  
11/01/05 to 6/30/07 \$17,600

Humoral Response to EEE Vaccination in Healthy Alpacas Daniela Bedenice, DMV  
Cummings School of Veterinary Medicine at Tufts University 12/01/05-11/30/06 \$9,855

## **Morris Animal Foundation Projects Supported by ARF 2005-2006**

An Integrated (Coding Gene and Microsatellite Marker) Radiation Hybrid Map of the Alpaca

Warren E. Johnson, PhD      National Cancer Institute, Frederick, Maryland 9/01/02-3/06

Funded by ARF - \$240,812/ 3yrs

Discovery of Microsatellites in Alpacas

Kylie Munyard      Murdoch University, Murdoch, WA 9/01/05-8/31/07

ARF contribution \$8680

Identifying Markers and Populations for Study of Inherited Traits in South American Camelids

Juan Carlow Marin/ Warren Johnson Universidad Mayor, Santiago, Chile/National Cancer Institute - Frederick

9/1/05-8/31/06 Funded by ARF \$19,320

## **Projects Completed in 2005**

Ovulation-inducing factor in alpaca semen

Gregg P. Adams, DVM, PhD.

Western College of Veterinary Medicine, University of Saskatchewan, CANADA

Expression of matrix metalloproteinases in CSF fluid of Alpacas with Meningeal worm: Role in pathophysiology of neurologic deficits. Jeffrey Lakritz, DVM, Ph.D. The Ohio State University

Bioavailability and Pharmacokinetics of Oral Omeprazole in Llamas Geof Smith, DVM, PhD North Carolina State University

## **Peer-reviewed publications resulting from ARF sponsored research**

Gandolf AR, Papich MG, Bringardner AB, Atkinson MW. Pharmacokinetics After Intravenous, Subcutaneous, and Oral Administration of Enrofloxacin to Alpacas. *American Journal of Veterinary Research*. 66(5):767-71, 2005.

Adams GP, Ratto MH, Huanca W, Singh J (2005) Ovulation-inducing factor in the seminal plasma of alpacas and llamas. *Biology of Reproduction* 73:452-457.

Kutzler MA. Bildfell RJ. Gardner-Graff KK. Baker RJ. Delay JP. Mattson DE. West Nile Virus Infection in Two Alpacas. *Journal of the American Veterinary Medical Association*. 225(6):921-4, 880, 2004.

Cebra CK. Tornquist SJ. Assessment of the Effects of Epinephrine and Insulin on Plasma and Serum Biochemical Variables in Llamas and Alpacas. *American Journal of Veterinary Research*. 65(12):1692-6, 2004.

Ueda J. Cebra CK. Tornquist SJ. Assessment of the Effects of Exogenous Long-acting Insulin on Glucose Tolerance in Alpacas. *American Journal of Veterinary Research*. 65(12):1688-91,2004.

Kutzler , MA , RJ Baker and DE Mattson. 2004. Humoral response to West Nile virus vaccination in alpacas and llamas. *J Amer Vet Med Assoc* 225: 414-416.

Junkins K. Boothe DM. Jensen J. Herzog T. Chatfield J. Disposition of Sulfadimethoxine in Male Llamas (*Llama glama*) After Single Intravenous and Oral Administrations. *Journal of Zoo & Wildlife Medicine*. 34(1):9-15, 2003

Junkins K, Boothe DM, Jensen J, Herzog T and Chatfield J. 2003. Disposition of sulfadimethoxine in male llamas ( *Lama glama*) after single intravenous and oral administrations. *J Zoo Wildl Med* 34:9-15.

Chakwenya J, Lakritz J, Tyler J, Fales WH, James-Kracke M, Smith K and Holle J. 2002. Pharmacokinetics and bioavailability of trimethoprim- sulfamethoxazole in alpacas. *J Vet Pharmacol Ther* 25: 321-327.

Cebra, C.K., S.J. Tornquist and S.A. McKane Effects of hydrocortisone on substrates of energy metabolism in alpacas.. *American Journal of Veterinary Research* 63: 1269-1274, 2002

Chakwenya J. Lakritz J. Tyler J. Fales WH. James-Kracke M. Smith K. Holle J. Pharmacokinetics and Bioavailability of Trimethoprim-sulfamethoxazole in Alpacas, *Journal of Veterinary Pharmacology & Therapeutics*. 25(5):321-7, 2002.

Cebra, CK Effects of Insulin on Glucose Clearance and Hydrocortisone-Mediated Hyperglycemia in Alpacas *American Journal of Veterinary Research* 62 (5); 682-686, 2001

Cebra CK, McKane SA and Tornquist SJ. 2001. Effects of exogenous insulin on glucose tolerance in alpacas. *Amer J of Vet Res* 62:1544-1547.

Penedo MC, Caetano AR and Cordova K. 1999. Eight microsatellite markers for South American camelids. *Animal Genetics* 30:166-167.

Penedo MC, Caetano AR and Cordova KI. 1999. Six microsatellite markers for South American camelids. *Animal Genetics* 30:399.

Penedo MC, Caetano AR and Cordova KI. 1998. Microsatellite markers for South American camelids. *Animal Genetics* 29:411-412.

**FOR MORE INFORMATION:**

[www.alpacaresearchfoundation.org](http://www.alpacaresearchfoundation.org)

There is a direct link to PubMed for article access

[www.MorrisAnimalFoundation.org](http://www.MorrisAnimalFoundation.org)