
International Conference on Camelid Genetics



2nd International Conference on Camelid Genetics and Reproductive Biotechnologies (ICGRB)

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www.camelidconference.com

The most important conference that you should attend this year is coming up September 16–18, 2011, in Houston, TX. Organized by Alpaca Registry, Inc. and the Alpaca Research Foundation, the ICGRB promises to be an exciting and informative event.

Many of the sessions (plenary as well as researcher and breeder breakouts) will focus on the genetic studies of camelids and others will focus on reproductive biotechnologies usage in camelids. So many interesting topics that directly impact the breeding of camelids for traits of economic value to their owners!

Geneticists and reproductive scientists from around the world including the Middle East, Australia, South America, and the United States who study all camelid species will convene in Houston to exchange information on the latest developments in their fields. The conference will be open to camelid owners and breeders, veterinarians, scientists, and all those interested in genetic improvement. Registration will be limited to 200 on a first come first served basis – go to www.camelidconference.com and register today!

Are you interested in understanding more about color? Do you wonder why those two dark brown alpacas of yours produced a white cria? Do you want to know how those two fawn alpacas produced that gorgeous black cria?

We'll have Dr. Carlo Renieri, University of Camerino, Italy present a plenary lecture on the genetic basis of black and brown colors in our alpacas. Dr. Phil Sponenberg in a breeder breakout session will give us the benefit of his years of observing alpaca colors and comparing the genetics to what is known in horses and dogs. We'll also get to hear Dr. Kylie Munyard share her thoughts on molecular genetic aspects of pigmentation in mammals, one of the research foci in her laboratory at Curtin University in Australia.

All of you Suri breeders – are you interested in the latest scientific research on the genetics of the Suri phenotype?

Dr. Belinda Appleton of Australia will deliver a plenary lecture on her research on this topic and Dr. Andy Merriwether will speak on the subject in a breeder breakout session.

Want to understand more about Estimated Progeny Differences (EPD) and how to use the tool in your own breeding program to deliver crias that exemplify the traits you most value?

Then come hear Dr. Mark Enns of Colorado State University and Dr. Shauna Brummet, ARI's Chief Scientist, fill you in on the industry-wide Alpaca Registry EPD program. We'll discuss how EPD are calculated and what the results mean and how you can use them to drive your breeding program in the direction you want it to go.

Many breeders and veterinarians share concerns regarding congenital defects in camelid species. We will benefit from the many years of research and field work by the inestimable Dr. LaRue Johnson when he provides insights, observations, and future directions in a breeder breakout session.

Still wonder if BVDV is of concern to camelid owners? (In a word, YES!) Dr. John Neill from the USDA Animal Research Service will discuss his work on Bovine Viral Diarrhea Virus (BVDV) to help us understand more about its function in persistently infected (PI) crias. This devastating disease is still with us. Learn more about how USDA scientists are helping us to understand and deal with this issue.

Do you just wonder how all of this genetics and genomics stuff is done and what it means overall to us as breeders of camelids?

We'll hear from Dr. Warren Johnson and his colleagues Drs. Polina Perelman and Joan Pontius, all three genomics researchers at the National Institutes of Health's Laboratory of Genomic Diversity discuss work being done worldwide to sequence and map the camelid genome and compare it to other mammalian (including human!) genomes. A treasure trove awaits researchers in camelid genetics as the data becomes more available to allow them to tap into work done in other species.

Dr. Terje Raudsepp, a cytogenetics specialist from Texas A&M University, will describe how physical mapping of the camelid genome is being done and how that physical map relates to the genetic sequence data being generated at other universities and research centers.

We're bringing Dr. Juan Carlos Marin from Chile to discuss his work on recreating population history and genetic purity of South American camelids. This should be really interesting to hear how he is studying the four South American camelid species and their interbreeding over the centuries.

Everything described above is just the genetics aspect of this conference! We also have convened a group of researchers, veterinarians, experts from other livestock species and alpaca breeders to present their work and discuss a variety of topics related to **reproductive biotechnologies**. What do these technologies mean to the worldwide camelid industry and specifically to the alpaca industry? These are questions that are important to producers of camelids in the old and new worlds. ARI's 2004 mid-winter conference focused on this topic. More than seven years later there is much new information to share and discuss.

Some of the camelid world's most distinguished scientists are coming to Houston to share their research and experiences with the ICCGRB. There will be a number of talks by renowned researchers in these technologies to share how they work, what they can accomplish, and in what ways they are best deployed.

Dr. Ahmed Tibary, well-known camelid reproductive specialist from Washington State University, will discuss in plenary session the state of the art techniques involved with *in vitro* production of dromedary camel embryos. Then, we'll learn from Dr. Lulu Skidmore, Technical Director of the Camel Reproduction Centre in Dubai, United Arab Emirates, about her work in achieving successful artificial insemination in dromedary camels.

Here in the US we tend to think of embryo transfer (ET) as a new technology, but it has been studied and used in the dromedary camels for many years. We are fortunate to have Dr. Abdelhaq Anouassi, Director of Veterinary Research Center AL hejen Infertility and Artificial Breeding Program, Abu Dhabi, United Arab Emirates, to present his research center's experiences in large-scale commercial ET in dromedary camels over the past twenty years.

Reproductive biotechnologies are utilized in South American camelid species as well. Coming to Houston from the Institute for Research and Technology in Animal Breeding, University of Buenos Aires, Argentina, is Dr. Marcelo Miragaya to share his team's experiences in the *in vitro* production of embryos in South American camelids. Also, coming to the conference from Peru is well known veterinarian, researcher, and alpaca judge, Dr. Julio Sumar, University of San Marcos, Lima, Peru, to provide insights on success factors in a large scale alpaca ET program.

From north of the border we are pleased to have Dr. Gregg Adams, Professor of Veterinary Biomedical Sciences from University of Saskatchewan, Saskatoon, Canada, to deliver a plenary lecture on a very exciting discovery made in his laboratory. Made more exciting by the fact that the work was partially supported by funds from the Alpaca Research Foundation, we'll learn more about the mechanisms of ovulation in camelids and a protein that he discovered called ovulation inducing factor (OIF).

There is much more on reproductive biotechnologies! In breeder breakout sessions we'll have several presentations that are "must hear" for any alpaca breeder.

From Drs. Tibary and Sumar there will be discussions on the advantages, disadvantages, and practical considerations in the use of ET and artificial reproduction in camelid species. Dr. Jane Vaughn from Australia will share her experiences as a veterinary service provider of AR. Also from Australia we'll hear from alpaca breeder Mr. Robert Gane on his farm's use of ET in their breeding program – the good and the bad. Dr. Peter Nagy, farm manager EIMCP, United Arab Emirates, will discuss the use of serum progesterone determination for synchronization protocols in camelid breeding programs.

We'll also hear from Dr. Mike Bishop, cattle rancher, researcher, and co-founder of bovine genetics company Infigen, Inc., who will provide industry perspective on the development and implementation of artificial reproduction technologies in the cattle industry.

In other breakout sessions researchers will have the opportunity to discuss such topics as how major rearrangements of chromosomes during sperm and egg formation can result in infertility from Dr. Michelle Kutzler of Oregon State University. Dr. Abdelmalek Sghiri will discuss the effects of nutrition on ovarian functions and Dr. Marcelo Ratto, University of Saskatchewan, will discuss current research work in superovulation of camelid females. Dr. Peter Nagy, UAE, will provide research insights into the use of AR in improving milk production in old world camels.

This ICCGRB follows the highly successful first International Workshop on Camelid Genetics held February 22-24, 2008, in Scottsdale, AZ. That meeting brought together a group of researchers and veterinarians focused on the genetic and genomic study of camelids. The results were new scientific collaborations and a greater understanding among researchers of basic research tools needed.

This ICCGRB is an opportunity for all alpaca breeders to come together and learn more about alpaca genetics as well as reproductive technologies that are used in many livestock species. State of the art plenary lectures targeted at all attendees will be delivered in morning sessions. The afternoons will be devoted to concurrent breeder and researcher break-out sessions. Breeder breakout sessions are designed to give all breeders the opportunity to ask any questions about genetics or reproduction in alpacas. We will also have poster sessions where attendees can speak personally with the presenters about their research projects.

On behalf of the organizing committee, the Alpaca Registry, Inc. and the Alpaca Research Foundation we invite every alpaca owner or breeder to attend this meeting. We are certain you will have an outstanding weekend of learning and camaraderie among friends, old and new. Please visit www.camelidconference.com for registration and conference details.

Organizing committee:
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