



Cornell University College of Veterinary Medicine

Baker Institute for Animal Health

DEDICATED TO THE STUDY OF VETERINARY INFECTIOUS DISEASES, IMMUNOLOGY, GENETICS, AND REPRODUCTION

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Baker Professor Talks with Breeders at Arabian Horse Festival

The first annual Asharqia Arabian Horse Festival drew 40,000 breeders, horse owners, artists, and tourists to Dammam, Saudi Arabia for four days of horse shows, races, art exhibits, and talks, all celebrating the majestic Arabian horse. The Baker Institute's Professor Doug Antczak was an invited speaker at the festival, where he presented his research on the genetic relationships between Arabians and other horse breeds.

"Legend has it that the Arabian is the oldest recognized breed of horse," said Dr. Antczak, the Dorothy Havemeyer McConville Professor of Equine Medicine. Bred by Bedouin tribes on the Arabian Peninsula, the horse has long been a fixture of Arabian culture. They even appear in rock art dating to 3,500 years ago. The breed has a distinctive "dished face," high tail, and arched neck, and its endurance and toughness make it popular for long-distance racing events.

During the workshop component of the festival, Antczak spoke with horse breeders from Saudi Arabia and other countries in the Middle East, Europe, and the U.S. about the basics of horse genetics. He presented his latest research into the genetic and historical relationships between Arabians and other horse breeds. "That project has involved sample collection from horses in the Middle East, Europe, and the United States," he said. "We spent many days of travel in the Middle East meeting horsemen and gaining their trust, often over cups of tea and plates of Arabian dates."

He began the project in 2013 with Dr. Samantha Brooks, a colleague at the University of Florida, when they received funding from the Qatar National Research Foundation to study the genetics of the Arabian horse, dromedary camel, and Arabian oryx. Antczak first gained entry to the world of Arabian horses through his work on Lavender Foal Syndrome, a deadly genetic defect that causes foals to be born with severe neurological problems and a lavender-tinted coat. In 2010 Drs. Antczak and Brooks discovered the mutation that causes the syndrome. They also developed a molecular genetic test that is used widely by Arabian breeders to identify carriers of the mutation. This allows breeders to select sires and dams that cannot produce affected offspring, and thus prevent the birth of foals with this lethal inherited disease.

Breeders were very interested to learn the results of Antczak's work on genetic relationships between different horse breeds. "It has already led to new invitations to speak to other Arabian breeders" said Antczak. "and to potential new collaborations to collect samples from rare strains of Arabians that we haven't studied yet."