Buckskin foal’s birth is a veterinary Mira(cle)

By Elizabeth Weise
USA TODAY

Kristin Contro spends her evenings watching a buckskin-colored foal prance across the pastures outside her home in Endwell, N.Y. The foal’s name? Mira, for miracle. And to Contro, the young horse is nothing short of that.

A rare and technically challenging bit of reproductive surgery, only once before successful, allowed for Mira to be born Aug. 4 in Binghamton, from eggs harvested from Contro’s beloved mare Reba, who died on Sept. 9, 2008.

Contro, 28, and Reba won dozens of prizes barrel racing over their six years together. The mare had to be put down because of a perforated intestine after a broken jaw led to a bad case of colic, a common ailment in horses.

Science

Afterward, Contro was “hysterical, because one of my favorite horses in the whole world was dead,” she says.

But something made Contro, a veterinarian’s assistant at Regional Rheumatology Associates in Binghamton, ask the veterinarians at Cornell University who had been caring for Reba, “Can you save her eggs?”

An emergency call went out to Sylvia Bedford-Guas, a professor of animal reproduction at Cornell’s School of Veterinary Medicine. By the time she got there, too many hours had gone by to allow Reba’s ovaries to be removed and sent intact to have their eggs harvested, a somewhat common operation in veterinary circles.

So Bedford-Guas offered to do something much more difficult: dissect the ovaries, find the microscopic immature eggs and preserve them in a nutrient “broth” that would buy them enough time to ship them to a laboratory where they could be matured and fertilized.

After the painstaking work, Bedford-Guas ended up with nine immature eggs, or oocytes. These were shipped to the lab of Katrin Hinrichs at Texas A&M’s school of veterinary physiology. Hinrichs, a specialist in equine reproduction, helped clone the first horse in North America in 2005.

After 24 hours maturing in a special growth medium, just five eggs survived to be fertilized. Only two viable embryos resulted. One each was implanted in a surrogate mare, but only one of the pregnancies took.

After waiting 90 days to ensure the pregnancy was proceeding appropriately, Contro had Lucy, the pregnant mare, taken by trailer to Binghamton, where she boarded her, anxiously awaiting the birth at the end of the mare’s normal 11-month gestation.

Although technically challenging, the reproductive services cost only about $4,000, a far cry from the $10,000 to $15,000 it can cost in humans.

It was nice work and a good collaboration between two universities, says Elaine Carnevale, a professor of equine reproduction at Colorado State University in Fort Collins, Colo. Her lab produced the only previous foal using this procedure in 2005.

Few veterinary centers in the United States are able to do this kind of postmortem reproductive work. As the technique becomes more standardized, it might give more possibilities to owners whose horses die unexpectedly, says Hinrichs.

The filly’s spunkiness reminds Contro of Reba. The pair excelled at barrel racing, a women’s rodeo event in which horse and rider maneuver in a clover-leaf pattern around three barrels in the shortest time.

When she’s not marveling at her new horse and the tight turns she already makes in the pasture — a good sign in a future barrel racer — Contro’s looking forward to four years from now when Mira will be old and trained enough to begin racing.

Mira “runs around in the pasture like a crazy horse, just like her mother. She wants to run all the time.”