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## BAKER INSTITUTE *for* ANIMAL HEALTH

Dedicated to the study of veterinary infectious diseases, immunology, genetics, and reproduction.



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[Heather Callaway Awarded NSF Fellowship](#) > New foals helping study immunology



Twilight's foal, Rickon, was born at the Institute's McConville Barn on June 17, 2016.



Rhaegar was born on May 15, 2016.

## News: New foals at the Institute

July 29, 2016

All over the world, horses are bred for speed, endurance, and strength, but at the Baker Institute [Dr. Doug Antczak](#) and his colleagues breed horses for their immune systems. Antczak's research focuses on the interactions between mother and fetus, work that has revealed important information about the placenta and new insights for advancing organ transplantation. Foals Rhaegar and Rickon (right, whom the barn staff named for characters from the popular television series *Game of Thrones*) are two of the latest additions to the herd.

Pregnancy requires a good deal of cooperation between the immune system of mother and offspring. In a healthy pregnancy, the mother's immune system recognizes a fetus but does not destroy it, a delicate interaction that defies our notion of what the immune system normally does, which is attack and reject foreign organisms.

In the course of the past 30 years, Antczak has developed a special herd of horses unlike any other in the world. Carefully selected and bred to have specific immune system genes, Antczak and his team rely on these unique horses to study the immunology of pregnancy as well as horse-specific conditions like [sarcoïd tumors](#) and equine herpesvirus infections, studies that would not be possible otherwise.

The most famous member of the herd is Twilight, the mare selected for the [horse whole genome sequencing project](#), but every spring and summer the Institute welcomes a few new foals like Rhaegar and Rickon (who is Twilight's foal) to the group, horses who are doing their part to help Antczak and his colleagues continue their groundbreaking work investigating the immune system.