Heloisa Rutigliano grew up in the state of Sao Paulo, Brazil in the city of Avaré. She earned her undergraduate degree in veterinary medicine from Sao Paulo State University and received her masters and doctoral degrees at the University of California, Davis. In 2010, Rutigliano began postdoctoral research at Utah State University. She is an assistant professor USU’s Department of Animal, Dairy and Veterinary Sciences and teaches in the School of Veterinary Medicine. She loves spending time outdoors with her husband, David Epstein, and their two children, Beatriz and Leonardo.

How do you like Utah?

Well, I had to learn to ski. I enjoy the snow, but I don’t like how long the winter is. I love all the mountains and the outdoor activities there are. I love mountain biking, trail running, and back country skiing. You can’t do those things in Brazil because there are no mountains near where I am from.

What were your favorite experiences growing up in Brazil?

My dad was an agronomist and a farmer. We didn’t live at the farm, we lived in the city. We would be at the farm every weekend playing with animals and riding horses. I always knew that I wanted to be connected to rural communities. I was a typical veterinarian who, since I was 5 years old, would say that I wanted to be an animal doctor.

I rode horses the whole day, worked and played with the animals. I remember tying the horse in front of the house, having lunch with my grandparents, and then riding again in the afternoon. We always had a lot of dogs, we adopted a lot of dogs, but we never had cats.

My mom is a teacher at a community college so I became a little bit of both of my parents.

What is your favorite animal to work with?

My favorite animals are dairy cows and goats. My dad never had goats, but I love goats. I think they are so interactive. I like animals that interact with you.

What are your research interests?
My first research interest is reproductive immunology. I study the developing fetus during gestation and the maternal immune system. For example, how the maternal immune system doesn’t reject the fetus or, in some cases, does reject the fetus. I use cattle as a model for that research.

My second area of research is characterizing animal models for human disease. I have a project funded by the American Heart Association that is looking at the effects of sex hormones like progesterone and estradiol on the incidents of atrial fibrillation in transgenic goats that have a gene making them more likely to develop atrial fibrillation. We are applying different hormonal treatments to see if they are more or less likely to develop atrial fibrillation.

The third one is a new project. It’s looking at metabolism and its effect on the immunity of dairy cows. Dairy cows have a very high metabolism because they are producing a lot of milk. We’re trying to understand the molecular basis of that and trying to understand what metabolite effects immune function and what immune function isn’t there. We’re looking at how to manipulate that with mineral acids or more carbohydrates.

How did you become interested in this type of research?

I think pregnancy is the most fascinating biological event. Creating another being inside an organism is fascinating to me. I’ve always been fascinated by reproductive biology in general, mainly pregnancy and immunology.

What is your favorite class to teach?

Immunology. There are so many discoveries going on, there are so many therapies involving the immune system nowadays and it’s a fast-evolving field. It changes all the time and it’s a complex system that is important for survival.

What are you most proud of during your time at USU?

I most proud of the number of students I have introduced to research. It’s getting to be over 20 graduates, undergrads, interns and even high school students I’ve had in my lab. Hopefully I’ve made them excited and curious about research.