**Interview With Dr. Jodie Wiggins**

Oklahoma State University genetics professor and researcher Dr. Jodie Wiggins has been recently dedicating her time and research into the fascinating world of sex determining mechanisms in lizards. In fact, her research could suggest the first species of lizards to demonstrate sex determining mechanisms outside of Australia. She reports that after receiving her bachelor’s degree in animal science from Lubbock Christian University and moving on to receive her master’s degree in biology from Midwestern University, her love for animals and ecology really took off. Because of this love, she decided to pursue a PhD in biology from Oklahoma State University with an emphasis in evolution and ecology. Since earning her degrees, Dr. Jodie Wiggins has not only been teaching classes at the university, but also leading research teams behind the scenes in order to learn more about ecology.

Dr. Wiggins decided to focus her research on sex determining mechanisms of reptiles, mainly lizards, because it is a brand-new field of study. She reports that “for a long time, scientists were convinced that genetics and the temperature of incubation determines the sex of reptiles,” but after research team in Australia had done research on bearded dragons and concluded that they can actually reverse sexes, Dr. Wiggins and a fellow OSU researcher wanted to test it for themselves. For their first experiment, they took lizard eggs and incubated them at a variety of temperatures. After they hatched and the sexes were determined, they found no trend that could contribute heat as a sex determining mechanism. Intrigued by the results, Dr. Wiggins then set out to determine what these mechanisms are.

Her next approach was to take the genome of the lizards, specifically from the sex chromosomes and use quantitative polymerase chain reactions (qPCRs) to copy the genome thousands of times. She copied them and amplified them with the hope that the females would have twice the genetic information because females have two X chromosomes. After testing and analyzing, the females did in fact have double the genetic information. This confirmed the presence of sex chromosomes. She was then able to optimize (correctly amplify) genes in 10 female lizards and 10 male lizards successfully enough to demonstrate sex changes of 4 out of the 20 lizards: 2 male and 2 female. However, the reviewers said this wasn’t enough evidence. In response, she conducted the same experiment that demonstrated a sex reverse in 8 out of 20 lizards; 4 male and 4 female. Her research has not only been one of exploring sex determining mechanisms in reptiles, but could also suggest the first species of reptiles to do so outside of Australia. She says she plans on researching this extensively in the future as her method is a “low technology method” and she believes with better methods and technology, more scientists should be studying this as well.