**Look into the Life and Research of Dr. Conway**

Dr. Tyrrell Conway is the head of the Microbiology and Molecular Genetics department at Oklahoma State University in Stillwater, OK. He runs the departments, teaches classes, and researches his passion of the bacteria in a mammal’s large intestine. Dr. Conway grew up in Bartlesville, OK and continued his education to Oklahoma State University. He received is Bachelors degree in Microbiology, then went on to achieve his PhD in Microbiology, as well. “Growing up, I have always been interested in science,” Dr. Conway explains. He thought he would end up going into Chemistry his entire high school career but decided his passion was in Biology his senior year. When he went to college at Oklahoma State University, he began in the forestry and wild life program but ended up switching to Microbiology when he took his first lab. When he was getting his PhD, molecular biology was a relatively new field of science and was not able to study that at Oklahoma State, so he decided to continue his post-doc work at the University of Florida. He found his passion for E.coli in the large intestine when he was an assistant professor. He and his students cloned new pathways in E. coli, this changed the direction of his research to studying the nutrition’s of the bacteria in the large intestine.

# Dr. Tyrrell Conway shared an article that he published with me, it is titled “Commensal and Pathogenic *Escherichia coli* Metabolism in the Gut.” He partnered with another scientist to write this, he name is Paul Cohen. Dr. Conway states that this article “summarizes the next 20 years” of his research with Paul Cohen. This article talks about a strategy that they call “Restaurant Hypothesis.” This states that certain bacteria will occupy distinct niches of the large intestine. If the bacteria did not separate itself, there would be 500-1000 species of bacteria that would essentially have to compete for their own life. This would result in far fewer species present. In the article, the writers lay out why they chose to study E. coli, rather than any other natural bacteria. E. coli is in every mammal’s gut; they say in the article. In order for the E. coli to colonize in the gut, it must enter through the mucous layer, which is where the bacteria will obtain its nutrients. The E. coli bacteria would rather get its nutrients locally than have to compete with the other bacteria.

# The article is a very detailed and informational packed read. Dr. Conway has worked his way to becoming a very intelligent and accomplished scientist in the world of Microbiology, especially with E. coli and the nutrients that the bacteria need in the mammal’s large intestine.

# Reference:

Conway, T., & Cohen, P. S. (2015). Commensal and Pathogenic Escherichia coli Metabolism in the Gut. *Microbiology Spectrum*, *3*(3). doi: 10.1128/microbiolspec.mbp-0006-2014