

Ecotek Student Scientists Develop Bacteria Identification Protocol

Bacteria is everywhere, on door knobs, on your hands and in the air. Some bacteria are not dangerous and can be dealt with using an off-the-shelf disinfectant or antibiotics from the drug store, while other strands of bacteria can be deadly and can be difficult to neutralize. According to the World Health Organization, thousands of deaths around the world are attributed to deadly bacteria that is spread from animals to humans (remember the SARS outbreak back in November 2002).

To help prepare for their visit to the UN this year, student scientists on Ecotek's biotech team began investigating the different ways in which bacteria grows and how it is transmitted between animals and humans. The team is made up of Nimet Williams, Angel Hall, and Amber Young. On many frigid and snow filled days, when their friends were hanging out at the mall, playing video games, or watching television, these young ladies were at the Ecotek laboratory studying the shapes, sizes and growth rates of bacteria.

Bacteria is a single-celled organism which can only be seen through a microscope. It comes in different shapes and is measured in micro-meters (which is a millionth part of a meter). Bacteria are mainly classified into phylums (phylum is a scientific classification of organisms) and can be identified in a number of ways such as shape and biochemical reaction.



While working on the project the team discovered that bacteria from amphibious animals, such as frogs, newts and turtles grew more aggressively, had a unique growth pattern and was harder to neutralize than bacteria taken from other hosts. As a result of this discovery, the trio developed a protocol they call the Amphibious Bacteria Identification (ABI) protocol. The team came up with this approach as a way of distinguishing bacteria from an amphibious host from bacteria that originates from other sources like door knobs and the air.

Making this unique discovery about amphibious bacteria growth patterns has paid big dividends for the team. First, it has exposed them to the protocol writing process. Second, it has allowed them to move their research downstream into understanding the role bacteria plays in outbreaks of infectious diseases.



About the Ecotek Science Program

Ecotek is a program within the Motor City Model UN Club, a 501c3 organization. It provides students ages 10 to 17 with the opportunity to work on science projects to help them better understand the role that science plays in policy making within international organizations like the United Nations. The students work on a diverse set of projects ranging from combating AIDS to protecting the environment. Once they have reviewed the UN treaties and have completed their lab research, the students meet with world leaders at the UN to share what they have learned.

To learn more about the program and the students highlighted in this press release, please contact Keith Young at 313-399-7893 or email him at keiyoung@ecotek-us.com