Research into cause of outbreak of C. pneumoniae among Americans

Authors: Jason Sanchez Philip Gonzalez Marcus Morris Lindsey Gilbert Jessica Lowe

Published Date: 12-03-2018

Alabama State University

School of Chemistry

The laboratory work started in the 1980s and is still going at the Cuban Center for Science and Technology for Environmental and Food Technology which is affiliated with the National University in Sancti Spiritus

In this work carried out in collaboration with U.S. colleagues, â€œwe performed the characterization of the C. pneumoniae bacterium identified as being the cause of a large outbreak of acute diarrhea caused by this bacterium in the U.S. state of Alabamaâ€, said Prof. Carlos Arce, the president of the institution in Sancti Spiritus.

The research carried out in the Nutritional Sciences Laboratory is thus based on the findings of large-scale molecular analyses carried out in cooperation with the Centers for Disease Control and Prevention in Atlanta, Georgia.

For Arce, in the laboratory work performed in this program, the bacterium identified as the cause of this outbreak is called S. pneumoniae and according to the research already carried out in the Sodella Submicrobiome Project, it is one of the most commonly used contamination candidates.

This substance is chosen for a specific situation, as doctors were reporting the infection as occurring in situations of very high water consumption during Thanksgiving eve.

The bacterium is classified as having a copper ratio of 7.4 (carbon:2, hydrogen:1.7), which is superior to species of the same species that are traditionally known for attacks of in vivo carbapenem resistance.

According to Arce, a protein property called bricepinase must be abused to successfully manifest in vivo resistance to the carbapenem form of the germ. However, experts not involved in the project say that there is nothing yet to confirm that bricepinase is using this weakness to trigger carbapenem resistance.

A Close Up Of A Bird On A Ledge