Cholera study provides exciting new way of looking at infectious disease

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Scientists in Italy have discovered a new perspective in the study of infectious disease. Normally, such studies are based upon laboratory work looking at an organism and how it works within the human body.

However, in a recent paper published in *Environmental Microbiology*, Dr Carla Pruzzo, Dr Luigi Vezzulli and Dr Rita R Colwell studied an environmental bacteria and it's interaction with the environment and found that this provided them with vast amounts of information about how the organism causes disease.

The organism they studied was Vibrio cholerae – responsible for causing Cholera. In the aquatic environment this bacteria interacts with chitin, a naturally-occurring compound found in the cell walls of fungi, and in the exoskeleton of crustaceans and insects. This interaction in the aquatic environment was found to play a large part in determining how the organism survives, how it is spread and how it infects humans.

Dr Vezulli, one author of the study said:

"This knowledge provides a new framework for the understanding of the role of the non-human environment in affecting the spread of environmental disease-causing bacteria (pathogens), their evolutionary derivation and the way they infect humans to cause disease. This, in turn, can be applied to improve current approaches to risk assessments and epidemiology of infectious disease and to develop new responses for combating pathogens in the environment."

Source: Blackwell