**Adhesion of *Vibrio cholerae* to granular starches**

H. Gancz, O. Meir, M. Broza, Y. Kashi, E. Shimoni

*Applied Environmental Microbiology* 71:4850-4855, 2005

Cholera is a severe diarrheal disease caused by specific serogroups of *Vibrio cholerae* that are pathogenic to humans. Cholera can become deadly and turn into an epidemic without adequate medical care. Appropriate rehydration therapy can reduce the mortality rate from as much as 50% of the affected individuals to <1%. Thus, oral rehydration therapy (ORT) is an important measure in the treatment of this disease. To further reduce the symptoms associated with cholera, improvements in oral rehydration solution (ORS) by starch incorporation were suggested. *V.cholerae* was reported to adhere to starch granules incorporated in ORS. The adhesion of 98% of the cells was observed within 2 min when cornstarch granules were used. Other starches showed varied adhesion rates, indicating that starch source and composition play an important role in the interaction of *V.cholerae* and starch granules. Sugars metabolized by *V.cholerae* showed a repressive effect on the adhesion process. The possible mechanisms involved are discussed. Comparing *V.cholerae* adhesion with the adhesion of other pathogens suggests the involvement of starch degradation capabilities. This adhesion to granular starch can be used to improve ORT.