The modern human diet consists of a wide variety of food materials from different sources. The active promotion of fruits and vegetables as an important part of a healthy diet has lead to a significant increase in fresh produce being eaten all over the world. Recent outbreaks of foodborne illnesses related to consuming fresh produce have heightened concerns that these foods might be a source of increasing source of illness. The minimal processing required for fresh and freshly cut produce, which omits any effective microbial elimination steps, results in food products naturally carrying microorganisms, some of which may be potentially hazardous to the human health.

Some of the foodborne pathogens like Salmonella spp., E.coli, Citrobacter spp., and Enterobacter spp. produce curli, which help in the initial steps of biofilm formation and enhance the resistance of cells in biofilms for against sanitizers and disinfectants. Curli are proteinaceous components of a complex extracellular matrix produced by many Enterobacteriaceae. They are thin, coiled fibers expressed on the surface of cells that bind several matrix and plasma proteins such as fibronectin, laminin, plasminogen, and azo dyes like Congo red. Raw vegetables, fruits, and unpasteurized juices contain a number of curli-producing foodborne pathogens which are associated with food-related diseases. These curli producers form biofilms on fresh produce as well as on food contact surfaces and resulting in the cross-contamination of produce. Curli-producing bacterial strains are characterized by their ability to bind Congo red, which provides a simple screening method for in vitro curli production. The Congo red binding technique has a qualitative approach, as well as a quantitative approach. Curli producers were isolated from fresh produce and unpasteurized carrot juice using a modified Luria Bertani (LB) medium. Curli-producing organisms form dry red rough colonies on modified LB media, while nonproducers form smooth white colonies. The parameters that control curli production such as temperature and osmolarity, were evaluated using the Congo red binding technique.
The resistance of biofilms formed by *curli*-producing organisms was evaluated; it was found that curli production increases resistance to various commercially used sanitizers.