

Before proofreading and formatting:

Modern human diet consists of a wide variety of food materials from different sources. The active promotion of fruits and vegetables as important part of a healthy diet has lead to significant increase in fresh produce being eaten all overworld. Recent outbreaks of foodborne illness related to consuming fresh produce has heightened concerns that these foods maybe an increasing source of illness. The minimalprocessing required for fresh and freshly cut produce which omits any effective microbial elimination step 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 sanitizers and disinfectants. Curli are proteinaceous components of a complex extracellular matrix and are produced by many Enterobacteriaceae. They are thin, coiled fibers expressed at 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 result in

cross contamination of produce. Curli producing bacterial strains are characterized by their ability to bind Congo red which provides a simple screening method *in vitro* curli production. The Congo red binding technique has a qualitative as well as a quantitative approach. Curli producers were isolated from fresh produce and unpasteurized carrot juice using modified luria bertani medium. Curli producing organisms formed dry red rough colonies on modified LB medium, while nonproducers formed smooth white colonies.. The parameters that control curli production such as temperature and osmolarity were evaluated using the Congo red binding technique.

After proofreading and formatting:

1. Introduction:

Modern human diet consists of a wide variety of food materials from different sources. ~~The~~ ~~a~~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-consumed-all-over~~worldwide. Recent outbreaks of foodborne illnesses related to ~~consuming~~ fresh produce ~~consumption has have~~ heighte~~ned~~ concerns that these foods may ~~be~~ an increasing source of illness. The ~~minimal~~minimum processing required for fresh and freshly cut produce, which omits any effective microbial elimination step, results in food products naturally carrying microorganisms, some of which may be ~~potentially~~ hazardous to ~~the~~ human health.

Some ~~of the~~ foodborne pathogens ~~such as~~like *Salmonella* spp., *Escherichia 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 to~~ sanitizers and disinfectants. Curli are proteinaceous components of a complex extracellular matrix ~~and that~~ are produced by many Enterobacteriaceae. They are thin, coiled fibers expressed ~~at on the~~ surface of cells that bind several matrix and plasma proteins such as fibronectin, laminin, ~~and~~ plasminogen ~~and as well as~~ azo dyes ~~like such as~~ Congo red. Raw vegetables, ~~and~~ fruits ~~and as well as~~ unpasteurized juices contain a number of ~~curli-curli~~ producing foodborne pathogens, which are associated with ~~food-foodborne~~related diseases. These curli producers form biofilms on fresh produce as well as on food contact surfaces and result in ~~eross-cross~~contamination of produce. ~~Curli-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~~

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Commented [Enago2]: Ensuring that the subject and verb agree in number is essential for grammatical accuracy. Both the subject and verb need to be singular or both need to be plural. Here, as the subject (recent outbreaks) is plural, a plural verb has been used.

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Commented [Enago3]: In American English, a comma (known as a serial comma) is generally used before "and" in a series.

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Commented [Enago4]: A compound modifier contains 2 or more words, which act together as one adjective and are connected by hyphens. Hyphens are used with these terms so that their meaning is understood clearly.

uses a qualitative as well as a quantitative approach. Curli producers were isolated from fresh produce and unpasteurized carrot juice using modified Luria-Bertani (LB) medium. ~~Cult~~

~~These producing~~ microorganisms formed dry, red, rough colonies on modified LB medium, while nonproducers formed smooth, white colonies. ~~The p~~Parameters that control curli production, such as temperature and osmolarity, were evaluated using the Congo red binding technique.

Commented [Enago5]: Proper nouns should begin with uppercase letters. Here, as Luria and Bertani are proper nouns, the casing has been revised.

SAMPLE