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## Listeria monocytogenes contamination in bell peppers

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The internalization and activity of *Listeria monocytogenes* in growing plants to better understand the saprophytic lifestyle of the bacteria has remained a relatively unexplored area. Salad vegetables are a recognized vehicle for transmission of *L. monocytogenes* but the question of how it contaminates the produce in the first place has been neglected. Red bell peppers imported to a processing and packaging company which tested negative for *Listeria monocytogenes* upon arrival but positive after being cut open. The seeds of the peppers were identified as the source of contamination and the chemotactic response to the pepper isolates to several plant sugars was investigated. It was hypothesized that a small number of infected fruits were resulting in widespread cross-contamination of product after these fruit were cut open. A survey of bell peppers purchased from local shops was also carried out to investigate the frequency of isolation of *Listeria monocytogenes*. From the survey (n=40), 5 peppers imported from The Netherland tested positive for L. monocytogenes (5/40) while those imported from Spain and Morocco (n=20 of each) were negative. We will present data and images to show the response of *Listeria monocytogenes* to sugars and pepper extracts which suggests that the bacteria are repelled by the flesh of the peppers possibly due to its capsaicinoid contents but are attracted to the seeds inside the peppers. This suggests that an internal plant system could be the route of migration for the bacteria.

## Biography

Chimya Markus Gundiri is currently a PhD student in the Food Sciences Department at The University of Nottingham, UK. She has a Bachelor's degree in Biomedical Sciences from The University of Manchester and a Master's degree in Biotechnology from The University of Essex.

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