

Almonds and Figs prevent Food borne illness

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Meningitis due to *Listeria monocytogenes* could now be treated with morin, a plant flavonoid found in almonds, figs and their plant family, claim researchers at the Alagappa University, Tamil Nadu in their recent study published in International journal of food microbiology.

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Listeriosis is a food borne bacterial illness that infects the brain and spinal cord and causes symptoms of meningitis. The causal organism, *Listeria monocytogenes* is associated with high rates of hospitalization and death. The bacteria are resistant to a wide variety of stresses including low temperature and pH that implies that it survives for long time in contaminated frozen foods. *Listeria monocytogenes* bacterial biofilms on food processing materials are resistant to detergents and to biocides, antibacterials and host immune system inside the body.

Researchers at the Alagappa University, Tamil Nadu have found that Morin- a plant flavonoid found in yellowish pigments of almonds, figs and other members of the plant family moraceae, kills bacterial cultures of *Listeria monocytogenes*, and reduces its biofilm without causing harm to other non-bacterial cells. They tested morin on the roundworm *Caenorhabditis elegans* and found that morin is absolutely non-toxic and prevents *Listeria monocytogenes* colonization in the gut of roundworms indicating that morin selectively kills *Listeria monocytogenes* bacteria and may also prevent its infection. They also found the pretreatment of bacteria with morin makes them susceptible to human immune system indicating that it may also improve *Listeria monocytogenes* clearance from the body after infection.

With these interesting findings, the scientists confidently say, "...findings of current investigation strongly suggest that morin is a promising broad-spectrum anti-virulence therapeutic agent for the treatment of bacterial infections".

If Morin proves to be an efficacious antibacterial agent in clinical studies, it could help reduce the burden of morbidity and mortality due to *Listeria monocytogenes* and help millions worldwide.