

Sesame seed extract and konjac gum may help ward off Salmonella and E. coli

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A new study in SCI's *Journal of the Science of Food and Agriculture* shows that konjac gum and sesame seed extract may offer protection against different strains of E. coli and Salmonella bacteria.

The study by Dr Petra Becker et al from Wageningen University and Research Centre, the Netherlands, shows that these foodstuffs act as binders for E. coli and Salmonella bacteria. The bacteria attach themselves to the fibrous foods instead of the gut cells of the host.

Dr Becker says that eating a diet full of these foodstuffs may offer protection from gastro-intestinal infections or reduce the severity of symptoms caused by E. coli or Salmonella.

Other foods that were shown to have a beneficial effect included yeast, tomato, and pumpkin.

In the lab study which also included negative controls, the scientists looked at 18 food-related products including coffee beans, carrot, mango, fermented soya, and food stabilizers such as locust bean gum and konjac gum. All were subjected to in-vitro exposure to various bacteria which were allowed to attach themselves to the test products. The levels of bound bacteria were determined in a microplate-based method specifically developed for this purpose.

The results showed that sesame seed extract and konjac gum had the greatest number of adhered bacteria, leading to the conclusion that they

may have a part to play in preventing certain E. coli and Salmonella from latching onto the host.

Dr Becker said: 'The importance of fibre, particularly from certain foodstuffs, in maintaining a healthy gut and digestion cannot be underestimated. The study shows that these foods bind certain bacteria and may be a means of stopping bacteria from entering host cells thereby preventing disease.'

Source: Society of Chemical Industry

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